The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 714.---Vol. XIX.] LONDON, SATURDAY, APRIL 28, 1849. [Price 6d.

Contract for Pig-Iron.

DEPARTMENT OF THE STOREKEEPER GENERAL OF THE NAVY, Somerset-place, April 20, 1849.

THE COMMISSIONERS FOR EXECUTING THE OFFICE OF LORD HIGH ADMIRAL OF THE UNITED KINGDOM OF GREAT BRITAIN AND IRELAND do hereby give Notice, that, on Tuesday, the 8th of May next, at One o'clock, they will be ready to TREAT with such PERSONS as may be willing to CONTRACT for SUPPLYING Her Majesty's Dockyards at Woolwich, Chatham, and Portsmouth with 1

SOFT MELTING PIG-IRON.

A distribution of the iron and a form of the tender may be seen at the said office. No tender will be received after One o'clock, on the day of treaty, nor any noticed, unless the party attends, or an agent for him, duly authorised in writing.

Every tender must be addressed to the secretary of the Admiralty, and bear in the left hand corner the words "Tender for Pig-Iron," and must also be delivered at Somerset Place, accompanied by a letter signed by a responsible person, engaging to become bound with the person tendering, in the sum of £400 for the due performance of the contract.

Stannaries of Cornwall—In the Vice-Warden's Court.

IN THE CONSOLIDATED CAUSES OF *CRAZE AND OTHERS v. FEGAN.*

WHEREAS the VICE-WARDEN did, by an ORDER, or DECREE, made in the above-mentioned consolidated causes, and bearing date the 8th day of February last, Order and Decree that a SALE be made of the ORES and HALVANS, and (if necessary) the ENGINES, MACHINERY, and MATERIALS, upon and belonging to WHEAL CURTIS MINE, in the parish of CROWAN, within the said Stannaries, under the direction of the Registrar of the Court, and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the same Order or Decree.

Notice is hereby given, that, pursuant to the said Order or Decree, and with the consent and approval of William Brougham, Esq., the Master charged with the winding-up of the affairs of the Wheal Curtis Copper Mining Company, a PUBLIC AUCTION will be HELD at WHEAL CURTIS MINE aforesaid, on Tuesday, the 1st day of May next, at Eleven o'clock in the forenoon, for SELLING, either together or in lots, the 2

UNDER-MENTIONED

MINING MACHINERY AND MATERIALS—viz.:

ONE 70-inch cylinder STEAM-ENGINE, complete, 10-feet stroke in cylinder, 8-foot in shaft, with two boilers, about 32 tons; 20 16-inch pumps, 2 16-inch matching-pieces, 2 14-inch ditto, 1 13-inch working piece, clacks, 1 14-inch windbore, rod-plates, whim, whim axle, pulley stands, screwing stock, beam and scales, pulleys, air-machine, swing solar, set-offs, collar launders, buckets and prongs, water barrels, a quantity of lead ore, about 2 cwts. of powder, ladders, new and old timber, new slate, doors and windows of sundry buildings, miners' chests, together with sundry articles of

COUNTING-HOUSE FURNITURE, &c. &c.

For viewing the same, application may be made to Mr. Morriss, at the mine; and for further particulars (if by letter, pre-paid) to Capt. Evans, St. Agnes; or to Messrs. Wright, Smith, and Shepherd, 15, Golden-square, London, or Mr. Roberts, solicitors, Truro; or to Mr. Stokes, solicitor, Truro.

Dated Registrar's Office, Truro, April 18, 1849.

SPEARNE CONSOLS MINE, ST. JUST, IN PENWITH.

TO BE SOLD, BY AUCTION, on Thursday, the 3d of May next, at Four o'clock in the afternoon, at the UNION HOTEL, in the town of PENZANCE, TWENTY (128ths) PARTS, or SHARES, in that excellent mine, known by THE NAME OF THE 3

SPEARNE CONSOLS,

Situate between and adjoining the celebrated mines of Levant and Botallack, in the parish of St. Just.

Not a single share has changed hands in the Spearne Consols for these last four years, during which time good dividends amongst her fortunate adventurers have been regularly made, with every prospect of a steady increase for many years to come.

An inspection of the mine, by parties contemplating a purchase is anxiously courted by the proprietor.

Application may be made to the resident agent, or to Geo. Hext Bellringer, auctioneer, Penzance.—Dated April 14, 1849.

STEAM-ENGINES, &c.—FINAL SALE AT WHEAL RUBY MINE, IN WENDRON.

TO BE SOLD, BY AUCTION, on Thursday, the 3d day of May next, by Two o'clock in the afternoon, at WHEAL RUBY MINE, near PORKELLIS, in WENDRON, 4

A 70-inch DRAUGHT ENGINE, with two boilers, complete.

A 32-inch STAMPING ENGINE, with boiler, and 72-heads.—The cylinder and all the well-work and other gear, nozzles, faggotted boxes, screws, first piece of rod, caps and plates of a 58-inch engine.

A large quantity of double beat valves and other brasses, several pumps of different sizes, steam and feed pipes, crab winch, chain, a quantity of smiths' and other iron, rod, flooring and other timbers in abundance, powder and safety fuse, 2 scale stands, oak lifter frames, and numerous other articles. T. H. EDWARDS, Auctioneer.

Dated April 21, 1849.

MINE MATERIALS FOR SALE, AT WHEAL VIRGIN MINE, NEAR GOLDSITHNEY.

TO BE SOLD, BY PUBLIC AUCTION, on Tuesday, the 8th of May, 1849, by Twelve o'clock precisely, at WHEAL VIRGIN MINE, the UNDER-MENTIONED MATERIALS—Viz.:

A 30-inch cylinder STEAM-ENGINE, 9-ft. stroke in cylinder, and 8-ft. stroke in shaft.
A 19-inch cylinder STEAM WHIM-ENGINE, with cage and boiler, about 5 tons.

3	Horse-whims		Miner's dial
5	14-inch 9-feet pumps		Whim kibbles
1	14-inch 8-feet windbore		Whim chain
27	11-inch 9-feet pumps		Several 10-inch brass buckets and prongs
1	14-inch 9-feet windbore		Brass and iron weights
1	10-inch 12-feet working barrel		Large ore beam and scales
1	11-inch 4-feet matching-piece		Double and treble brass and iron blocks
4	12-inch 9-feet pumps		30 to 40 gallons rape oil
1	12-inch 6-feet windbore		A quantity of brick
1	12-inch 9-feet plunger-pole		Old wrought and cast-iron
1	13-inch 7-feet pole case		Junk
1	13-inch 2-feet matching-piece		
1	12-inch stuffing-box and gland		

Also the COUNTING-HOUSE FURNITURE, eight-day clock, &c. 5

Dated April 24, 1849.

AT SHIPLEY, IN DERBYSHIRE.

TO ENGINEERS, MILLWRIGHTS, RAILWAY CONTRACTORS, BUILDERS, &c.

MR. G. O. BROWN has received instructions from I. T. Leather, Esq., who is about completing his contract on the Erewash Valley Railway, to OFFER for PUBLIC COMPETITION, BY AUCTION, on SHIPLEY WHARF and premises occupied by him, on Tuesday, May 1, 1849, a valuable and extensive collection of 6

RAILWAY PLANT:

Comprising TWO LOCOMOTIVE SIX-WHEELED ENGINES—viz.: One do. American built, with cylinders working outside, 12 inches diameter, 20-inch stroke; two driving wheels connected, 4 feet 8 inches diameter; four trailing wheels, 2 feet 6 inches diameter; boiler, 8 feet 3 inches long, 3 feet 8 inches diameter; 96 tubes, 8 feet 3 inches long; good copper fire box, water guage, taps, glasses, &c. &c.; and an excellent tender, with screw breaks, &c., complete.

ONE LOCOMOTIVE SIX-WHEELED ENGINE (made by Nasmyth, Gaskill, and Co., Manchester.) Two driving wheels connected, 5 feet diameter; four trailing wheels, 3 feet 7 inches diameter; inside cylinders, 12½ inches diameter, 20-inch stroke; boiler, 8 feet 3 inches long, 3 feet 8 inches diameter; 102 tubes, 8 feet 3 inches long; copper fire box, water guage, glasses, taps, &c., &c.; and an excellent tender, with screw breaks, complete.

ONE very superior 8-horse power HORIZONTAL STEAM-ENGINE, 10 inch cylinder; 2 feet 3 inch stroke, in excellent working condition, and boiler equally good, working a saw mill with upright frame, and 13 saws; also circular saw table, and six circular saws; saw mill shed, 26 feet 6 inches inside; engine house, 14 feet 6 inches by 7 feet 6 inches inside, covered with pan tiles; a good iron tank to supply the engine; engine stack, &c., complete.

A wood shed of new boards, containing about 1400 superficial feet.

One engine shed, standing at Long Eaton, containing about 2400 feet of deal boards; about eight cube yards of brickwork inside the shed; a well inside, containing brickwork 5 yards deep, 5 feet diameter; one pair smith's large vice.

A quantity of old brass; about 20 tons of old metal; several tons of old scrap iron.

An excellent double purchase crane standing on Shipley Wharf.

One pair double purchase setting legs.

A wood water tank, 10 feet 9 inches long, 5 feet 8 inches wide, and 3 feet 2 inches deep; with water tap and leather pipe, &c., &c., standing at about a quarter of a mile below Sandiacre: one pump; one brick well 7 feet in diameter; a quantity of battens and boards attached thereto; 8 upright posts to support water tank, and a wood cabin.

1170 fancy poles, 2 feet 6 inches long, 2½ inches by ¾ inch.

4 oak beams, 16 feet long, 12 inches square.

15 lots of boards, scantling, &c., suitable for collieries, &c.

About 20 lots of other hardwood poles, suitable for pit work.

425 excellent tramway plates, one yard each, extra strong.

One excellent cast-iron arch, 19 feet long, by 5 feet 3 inches wide, and 6 inches rise; made in 12 pieces, about 1 cwt. each.

150 four holed post for fencing.

4000 cube feet of excellent (new felled) ELM TIMBER, from 12 to 20 inches girth, in lots to suit purchasers.

15 powerful, young, active, seasoned CART or RAILWAY HORSES, and HARNESS, and one very superior HARNESS HORSE, 7 years old.

1 DOG CART, in excellent condition, together with numerous other implements connected with the trade.—*The Sale will commence at Ten o'clock on Shipley Wharf.*

Shipley Wharf is 7 miles from Alfreton, 11 miles from Derby, 9 miles from Nottingham, and 13 miles from Mansfield.

To view the lots, engines, saw mill, &c., apply to Mr. Jno. Kedger, Shipley.

MINING PROPERTY FOR SALE.—TWO-THIRDS of a most valuable SILVER-LEAD MINE, near the celebrated Old Trebarget Mine, ST. TEATH, Cornwall.

THREE-FOURTHS of a LEAD MINE, near DOLGELLY, Merionethshire. Also, a compact SLATE QUARRY, suitable for an £8000 capital. The metal is of first-rate quality; it is situate on the Gaewern Vein, the properties of which are well known in the London market. Also, a ROCK SLATE QUARRY, where slab enough may be raised to supply the whole of Europe. 7

WHEAL VULCAN—IRON MINE.—TWO-FIFTHS of this mine may be had on very easy terms; it will pay a regular dividend of 15 per cent.

A TIN MINE, adjoining the noted Wheal Treseoll, and having the same lodes, which have been cut, and some excellent work broken; the proprietor undertakes to guarantee to the purchaser to put up an engine, smiths' shop and storehouse, stamping-mill, put down the shaft 20 fathoms, cut the lode, and return tin to market within two months. He will, moreover, take one-third the shares himself.

ONE-QUARTER PART of the COOMBE VALLEY SLATE QUARRY, now making considerable returns.

Specimens of the slate may be seen, and every other information obtained, by applying to Mr. C. S. Richardson, C.E., land and mine surveyor, Whitefriars-street, London.

OLD WHEAL PROSPER TIN MINE, in the parish of ST. EWE and ST. MEWAN, adjoining the Great Polgooth.

Mr. C. S. RICHARDSON respectfully begs to inform his mining patrons, that the above well-known MINERAL PROPERTY is placed in his hands, for the purpose of RAISING a COMPANY to WORK the MINE. He is informed that it has lain idle for nearly 60 years, but the reports received from so many different quarters, and from such respectable sources, coupled with the report of his own agent, leave him no alternative but a thorough conviction it must be a promising speculation. 9

On an early day next week a prospectus, with a lithograph plan of the sett, will be ready for public perusal, when he earnestly solicits his friends to favour him with a visit at his office, 5, Whitefriars-street, Fleet-street.

A box of excellent specimens has been received, and Mr. Coliver, of Hewas, who is at present working the mine, has kindly intimated his intention of remaining a few days in London, for the purpose of explaining any questions that may be asked relative to the value of the undertaking.

N.B.—Mining Surveys, Plans, Sections, Estimates, and Specifications, made at the shortest notice, on a somewhat original principle, and at moderate terms. Mines undertaken by contract, and every assistance given to facilitate mining enterprise, at the smallest possible cost.

TO CAPITALISTS AND MINE ADVENTURERS.

EAST WHEAL GEORGE MINE.

This SETT is situated in the parish of WALKHAMPTON, in the county of DEVON—is very extensive, and holds out great promise for mining adventure. One lode has just been discovered, and opened upon to a short distance, 10 feet from surface, where it is from 3 to 4 feet wide, with a leader of copper ore, from 12 to 15 inches big, a sample of which has been assayed by Mr. Harvey, of Tavistock, and found to contain from 13 to 15 per cent. produce. Two other parallel lodes have been discovered, but have not yet been explored; and the property has been inspected by several mining agents, by whom it is considered a speculation worthy of trial. 10

The present proprietor wishes to be joined by a few gentlemen of capital, with a view of forming a company to work the mine with spirit; and for that purpose, proposes to divide it into 512 shares, of which he is willing to hold a considerable number.

Every further particular may be obtained, and samples of the ore seen, or sent to address, on application (post-paid) to Mr. John Pomeroy, Horrabridge, near Tavistock, Devon.

TO BE SOLD, OR LET, the UNEXPIRED TERM of 17 years in the LEASE of a valuable GRANITE STONE QUARRY, near NEVIER PORTHDYLLEAN, replete with buildings, smithy, workshop tools, &c., with every convenience for shipping, being close to a good harbour. The stone is of excellent quality—can be raised at little expense, and in blocks of several tons, or can be dressed into paving sets of small dimensions. 11

Also, TO BE SOLD the UNEXPIRED TERM of 21 years in the LEASE of the LEAD MINE at BWLCH-Y-PHOM, within 4 miles of Port Madoc; the mine has been very productive, and is still producing a large quantity of ore. Royalty is. 10d. per ton.

Also, TO BE LET, OR SOLD, the UNEXPIRED TERM of 18 years in the LEASE of an IRONSTONE MINE, near ABERSOCH, near Pwllheli, replete with buildings, smithy, workshop tools, &c. Quantity of ore unlimited—quality about 45 per cent.

For terms and further particulars, apply to Mr. J. Thompson, St. James's Chambers, Back King-street, Manchester.

TO BE LET, SEVERAL valuable VEINS, or SEAMS, of ANTHRACITE COALS and IRON ORES, in the parish of BETTWS, CARMARTHENSHIRE.—These mines consist of many SEAMS of COALS and IRON ORES. The seams of coals are from the thickness of 6 ft. and 3 ft. downwards. The iron ores are from the thickness of from 15 to 16 inches of ore, called the "Black-band." Of the red iron ores downwards from about 6 inches or more, in balls or nodules, and some of these courses are so near to each other, that three of them might be worked together. These minerals are in the vale and on the banks of the Aman, under the Maesyquarre Estate, and within the distance of half a mile on the south of the Llanelly Railroad, with a turnpike-road through the lands leading to that railroad. 17

There are most eligible places here for erecting blast-furnaces and forges, with an ample supply of water for the machineries, and a quarry of excellent building stones is on the spot, at the distance of 4 or 5 miles from lime, with good roads to the limekilns, and there are choice situations upon the lands for building all the requisite houses, with suitable gardens to each house.

A long lease will be granted, on reasonable terms, to any responsible person or company. The locality is in a fine salubrious, open, and very populous country, and every encouragement and accommodation will be afforded to any respectable person or company who may undertake the working of those mines.

For further particulars apply to John Williams, or Mr. Thomas Parry, attorneys-at-law, Carmarthen; and the tenants will show the premises.

CORNWALL—TYWARNHAILE MINES.

IMPORTANT AND VALUABLE COPPER MINES TO BE LET, BY PRIVATE CONTRACT, comprising the extensive SETTS formerly KNOWN AS 12

UNITED HILLS,	WHEAL CHARLES, and
SOUTH TOWAN,	WHEAL FANCY,

belonging to the Duchy of Cornwall, in the parish of SAINT AGNES.—These mines having been surrendered to the Duchy by the late lessees, during the extreme pressure of the latter part of the year 1847, have since been placed in good working order, and are yielding large and increasing returns. They are now to be leased, at a moderate rate of dues, for a term of 21 years.

An arrangement can be made for putting the lessees of the Tywarnhaile Mines in possession of the adjoining setts of Wheal Sparrow, West Wheal Sparrow, Basset's United Hills, Wheal Clarence, and Wheal Lydia, the property of the representatives of the late John Basset, Esq.

Proposals will be received at the Duchy of Cornwall Office, Somerset House; and any further information may be obtained by application there, or to R. Taylor, Esq., Falmouth.

Duchy of Cornwall, Somerset House, Feb. 20, 1849.

JAMES BOYDELL, LAND, MINE, AND MACHINERY VALUER, AND AGENT, 13

No. 54, THREADNEEDLE-STREET, LONDON,

HAS TO DISPOSE OF

A PATENT RIGHT for BUILDING VESSELS with IRON, on a principle which combines increased strength with greater economy of manufacture.

Also, ONE for the CONSTRUCTION of IRON ROOFS, on a like principle. A specimen of this may be seen as a roof covering one of the retort houses of the Birmingham and Staffordshire Gas Company, by permission of Mr. Clift, the engineer, at the works.

Also, ONE for IRON JOISTS and RAFTERS, and for a plan of joining large plates and sheets of iron.

Also, ONE for the AMALGAMATION of STEEL and IRON—in the progress of the manufacture of the latter, by which a great saving may be effected in the cost of making edged tools.

The LEASE of a very celebrated FOUNDRY and ENGINEERING ESTABLISHMENT, on the River Dee, complete, with fixtures, machinery and tools, in working order, and ready for any parties to embark at once on building first-class iron steam-vessels, and marine and locomotive engines.

The above will be found worthy the attention of any parties desiring to invest money in a profitable business, as they will be disposed of upon terms which will ensure an unusual return to the purchasers of them.

Also, SOME COAL and IRONSTONE MINES, FREESTONE QUARRY, and a large FREEHOLD ESTATE.

Also, STEAM-ENGINES and MACHINERY, of all descriptions, and which he is enabled to offer at very moderate prices.

Particulars of the above may be had, upon application, at 54, Threadneedle-street.

TO ENGINEERS, BUILDERS, AND ARCHITECTS.

JAMES BOYDELL, 54, THREADNEEDLE-STREET, having been a very large manufacturer of machinery and irregular shaped iron, and having accomplished the rolling of some descriptions of the latter, thought by many to have been impracticable, will be happy to ASSIST any ENGINEERS, SHIPBUILDERS, and ARCHITECTS, in the planning of the details of what IRONWORK they may have occasion for, or bringing to perfection any invention in machinery, as well as procuring such materials for the purpose as they may require.

TO ENGINEERS AND BOILER MAKERS.—The BIRMINGHAM PATENT IRON TUBE COMPANY 14

MANUFACTURE PATENT LAP-WELDED IRON TUBES (under Mr. R. Prosser's Patent) for Marine, Locomotive, and all Tubular Boilers. Also, TUBES for Gas, Steam and other purposes. All sorts of IRON GAS FITTINGS.

Works—Smethwick, near Birmingham.

London Warehouse—No. 6, Upper Thames-street.

TO FOUNDERS AND MALLEABLE IRON MANUFACTURERS, GLASS MANUFACTURERS, BUILDERS, AND CONTRACTORS.—The directors of the YORK, NEWCASTLE, and BERWICK RAILWAY COMPANY will MEET at their office, in YORK, on Monday, the 30th day of April, 1849, for the purpose of RECEIVING TENDERS for the EXECUTION of the CAST and MALLEABLE IRON WORK required for the PASSENGER SHED and ROOF of the CENTRAL STATION at NEWCASTLE-UPON-TYNE, and also for SUPPLYING the GLASS required for the above roof and other parts of the building. 15

Also, for BUILDING a small STATION-HOUSE at the Half-Moon-lane, GATESHEAD, and another at the east entrance of NEWCASTLE.

Plans and specifications of the various works are to be seen at the office of Mr. Dobson, architect, Newcastle.

Tenders to be delivered to the secretary, at York, before Ten o'clock in the morning of the 30th inst.

GEORGE HUDSON,
York, April 10, 1849. Chairman of the Board of Directors.

FOUNDRY AND SMITHERY BUSINESS.—A good opportunity for embarking in this business, in the centre of the largest Mining District in Cornwall, or for working a Grist Mill.—TO BE LET, with immediate possession, for a term of years, the extensive PREMISES called REDRUTH HAMMER-MILL FOUNDRY, lately occupied by Sims and Co., calculated for an extensive Steam-Engine Business, as well as for the Manufacture of Mining Articles. 16

The stream of water is capable of doing a large quantity of work—turning three powerful wheels for various operations, and the recently-erected casting buildings make the premises very complete. They are also capable of being converted into a Grist Mill, under most advantageous circumstances, which is much required in that locality.

For particulars apply to Mr. Nicholas Trevena, Redruth.

FOR SALE, a SECOND-HAND 60-horse HIGH-PRESSURE PUMPING-ENGINE, 30-inch cylinder, 7-feet stroke, with two large boilers, in excellent condition. Also, a 10-horse ATMOSPHERIC DRAWING-ENGINE, with boiler, cog-wheels, and drum—the cylinder constructed so as to be easily altered into a 20-horse condensing. Also, a LOT of 15-inch PUMPS. 17

Apply to Mr. William Clark, Holmes Colliery, Rotherham, Yorkshire.

STEAM-ENGINE WANTED.—Any person having FOR SALE a SECOND-HAND CONDENSING STEAM-ENGINE, of from 30 to 35-horse power, in complete and good condition, suitable for the purpose of winding coal and pumping water, may hear of a PURCHASER on application to Mr. G. Fearo, Timsbury Coal-Works, near Bath. 18

Timsbury Coal-Works, April 21, 1849.

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK. 19

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.
Price—£12 to £16; with boiler, £22 per horse.

TO BE SOLD (Cheap), a 40-horse HIGH-PRESSURE HORIZONTAL STEAM-ENGINE, quite new; cylinder 24 inches diameter, stroke 4 feet, mounted upon a strong metal box frame.—Apply to Mr. Matthew Smith, Sylvester Works, Sheffield, where the engine may be seen. 20

GRANITE QUARRY TO BE DISPOSED OF, in the SOUTH of CORNWALL, within three miles of the shipping port—lease for ever; dues most reasonable; quality first-rate, and quantity unlimited.—For inspecting samples, and further particulars, apply to Mr. Bartlett, 58, Lombard-street, London. 21

DUISBURG IRON-WORKS AND MINES, *IN WESTPHALIA, CLOSE TO THE RHINE.*

Managed in England according to the principles of the "Cost-book System," and in Prussia as a *Société in Commandite*, under laws limiting the liability of the shareholders to their personal subscription.

Company's Offices, 28, Moorgate-street, City. 22

MINING PROPERTY.—Mr. JAMES HERRON, MINE AGENT, 33, CLEMENTS-LANE, LOMBARD-STREET, has received instructions to DISPOSE of SHARES in FIRST CLASS MINES, paying regular dividends, and yielding to the purchaser from 17½ to 25 per cent. upon his outlay. He is also in a position to transact business in the following—viz.; United Mexican, St. John del Rey, Altens, Tamars, Tincroft, Holmbush, Trelawny, Mary Ann, Kirkcudbright, Bedford, Treviskey and Barrier, Trethellan, Great Devon Consols, South Wheal Frances, West Condurrow, and Stray Park Mines. 23

MINING OFFICES, THREE KING'S COURT, LOMBARD STREET, LONDON.—Messrs. R. TREDINNICK & CO. beg to draw the attention of capitalists to the DEPRESSED MARKET VALUE of SHARES in ENGLISH and FOREIGN MINES, many of which pay dividends of from 20 to 30 per cent. per annum, whilst those on the eve of so doing are selling at corresponding low prices.—Messrs. T. & Co. continue to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously, upon personal application.—MONEY ADVANCED upon the above securities. 24

MINING OFFICES, No. 8, GEORGE-YARD, LOMBARD-STREET, LONDON.—Mr. RICHARD THOMAS (who has had 20 years' experience as a mining agent in London) OFFERS his SERVICES in the PURCHASE and SALE of MINE and OTHER SHARES, on commission. Purchases in many valuable mines may now be made at unprecedently low prices. The fullest information given (without charge) relative to mining investments and operations. 25

N.B.—R. T. has now ON SALE a limited number of SHARES in an undertaking offering unusual advantages, situated in one of the best mining districts in Cornwall.

Full particulars will be furnished on application.

MR. GEORGE BATE, Jun., CIVIL ENGINEER AND SURVEYOR, *WOLVERHAMPTON.*

Offices in Queen-street, corner of Piper's-row. 26

N.B.—UNDERGROUND MINING SURVEYS accurately executed.

JAMES LANE, MINING SHARE DEALER, 27

80, *OLD BROAD-STREET, LONDON.*

ANGLO-MEXICAN MINT OFFICE, 5, Broad-street buildings, April 20, 1849.—Notice is hereby given, that the ANNUAL GENERAL MEETING of shareholders in this company will be HELD at the office, as above, on Tuesday, the 1st day of May next, when one director will be elected, in the place of H. W. Schneider, Esq., who goes out by rotation, but is eligible for re-election, and will be proposed accordingly.—The chair to be taken at One o'clock precisely. 28

G. B. LONSDALE, Secretary.

CAMBORNE CONSOLS MINING COMPANY.—NOTICE OF CALL.—Notice is hereby given, that the directors have this day resolved that the subscribers, or shareholders, in this company PAY, and they are hereby required to pay, on or before the 21st day of April next, into the bank of Messrs. Praed and Co., 189, Fleet-street, London, a CALL of ONE POUND upon each and every share held by them in this company; and that, pursuant to Art. 116 of the Company's Deed of Settlement, all and every share, or shares, upon which the said call of £1 per share shall not be paid within 14 days after becoming due, will be subject to absolute forfeiture.

No payment on account of the aforesaid call will be received by the company's bankers without a special order, which may be obtained on application to the secretary, at the company's offices, 29, Poultry, with whom the present certificates must be deposited, to be exchanged for share certificates of £6 paid.

By order of the board of directors,
TUCKER & STEVENSON,
Sun Chambers, Threadneedle-street,
Solicitors to the Camborne Consols Mining Company. 29

London, this 19th day of March, 1849.

WEST WHEAL JEWEL MINING ASSOCIATION.—Notice is hereby given, that the ANNUAL GENERAL MEETING will be HELD at the company's office, as under, on Monday, the 14th day of May next, at Twelve for One o'clock precisely.

WILLIAM NICHOLSON, Secretary.
57, Old Broad-street, April 14, 1849. 30

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 31

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

SIR JAMES MURRAY'S FLUID CAMPHOR.—This cordial preparation is infinitely more *effectual* and *uniform* in its soothing and reviving influence than Camphor, *either in substance or suspended (a temporary or mechanical mixture.* This *permanent solution* is safe and agreeable to all; it raises the spirits, renovates the powers of life in low fevers, abates spasms, allays irritation of the stomach and nerves, and is the best vehicle for tonics and sedatives in diarrhœa dysentery. As a warm restorative it is invaluable; and is of use in sea-sickness, fainting, and bilious complaints.

This ORIGINAL FLUID CAMPHOR (containing 3 grains of camphor to the ounce) is sold by the sole consignee, Mr. William Bailey, of North-street, Wolverhampton, and all wholesale and retail druggists and medical agents throughout the British Empire, in bottles, at 1s., 2s., 4s., and 8s. each, with directions for use. 32

Also, Sir JAMES MURRAY'S FLUID MAGNESIA, in bottles, at 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each.

The ACIDULATED SYRUP, in bottles, 2s. each.

AMERICAN RAILWAY STATISTICS.—The annual report to the Legislature of the Massachusetts railway companies has just been published. The number of companies is 37, with a capital stock of $50,004,100. The total length of the roads is 954 miles, besides 88 miles of branches, and the cost has been $46,777,009, or about $45,000 per mile. The earnings for the year were $6,067,154 and the working expenses $3,284,933, or a fraction over 54 per cent. Of the above lines only 220 miles are of double track. The mean speed of passenger trains has been about 23½ miles, and of luggage trains about 12½ miles. The return of casualties seems very heavy, 56 persons having been killed, and 65 injured. During the year 300 miles of new railroad have been put into operation on the various lines leading to Boston. The entire number of miles in the State being, with the branches, 1043, and the total in the United States being 6421—it appears that nearly one-sixth of the whole is in Massachusetts. In addition to the above, there are 43 companies with Acts of Incorporation, now in force, from which no returns were made. Most of them, it is remarked, are not even organized, and probably never will be. Their aggregate capitals amount to $11,262,000.

THE ALKALI TRADE.—No branches of British industry have greater (if so much) cause to complain of the war-system at this moment unhappily prevailing in Europe, than the alkali manufacturers—the blockade of Sicily depriving them of their supply of brimstone, whilst the blockade of the German rivers and ports precludes the ingress of their manufactures.—*Gateshead Observer.*

THE CHOLERA.—Mr. J. T. Duncan, of Edinburgh, writes—"Sir: The letter of the British Ambassador to his brother, the Bishop of Derry, is now most important—he states, that 'to his own knowledge, dissolved camphor proved to be a certain cure for cholera, both at Paris and in Germany; and, if taken in time, the cure is generally effected before it is possible to procure a physician—that is, in less than an hour. I think it a solemn duty to confirm this nobleman's letter.—I found Sir James Murray's fluid camphor by far the most effectual preparation; a wine glassfull, every five minutes, produced warmth, perspiration, and a manifest decrease of sickness and of cramps, with rapid revival of spirits and circulation. As a preventive, I have supplied this fluid very extensively to the poor, and with marked advantages in restoring and preserving good digestion and nervous energy, essential guards against cholera."

TO PERSONS PARALYSED, &c.—EXTRAORDINARY CURE BY HOLLOWAY'S OINTMENT AND PILLS.—Copy of a letter from Capt. E. F. Ferris, commanding Rumpore Forus.—"Bohlecund, India, Jan 15, 1849, to Professor Holloway—Sir,—I deem that your wonderful medicines ought to be well known, and I take the liberty of reporting a miraculous cure under my own eye. An old woman had been for this last two years quite bed-ridden, having entirely lost the use of her legs from the hip-joint. Her limbs were apparently quite dead, and without the slightest feeling, but, by the use of your ointment and pills, she is quite restored. (Signed.) E. F. FERRIS."—Sold by all venders of medicine, and at Professor Holloway's establishment, 244, Strand, London. 33

ON NERVOUS DEBILITY AND GENERATIVE DISEASES.

Just published, the fortieth thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, by the Author, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, &c.

MANHOOD: the CAUSES of its PREMATURE DECLINE, with plain directions for its perfect restoration. A Medical Essay on those diseases of the Generative Organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in youth, manhood, and old age; with practical remarks on marriage, the treatment and care of nervous and mental debility, impotency, syphilis, and other urino genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.—By J. L. CURTIS, consulting surgeon, 7, Frith-street, Soho-sq., London. 34

REVIEWS OF THE WORK.

We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, preceptor, or a clergyman.—*Sun*, Evening Paper.

J. L. Curtis, *On Manhood, and the Causes of its Premature Decline; with Plain Directions for its Perfect Restoration.*—[Strange, Paternoster-row.]—This is a book replete with valuable advice and information. It developes the fearful shoals on which a large proportion of human happiness is wrecked, and furnishes a chart by which they may be avoided and escaped. Fortunate for a country would it be, did its youth put into practice the philantiropic and scientific maxims here laid down. One cause of matrimonial misery might then be banished from our land, and the race of the enervate be succeeded by a renewal of the hardy vigorous spirits of the olden time.—*United Kingdom Magazine.*

Manhood: a medical work.—To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions—whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health.—*Chronicle.*

Manhood: by J. L. Curtis and Co.—Their long experience and reputation in the treatment of these painful diseases is the patient's guarantee, and well deserves for the work its immense circulation.—*Era.*

Published by the author, and may be had at his residence; sold also by Strange, 21, Paternoster-row, London; Heywood, Oldham-street, Manchester; Howell, 16, Church-street, Liverpool; Robinson, 11, Greenside-street, Edinburgh; Campbell, chemist, 146, Argyle-street, Glasgow; Berry and Co., Capel-street, Dublin; and by all booksellers.

NEW MEDICAL WORK.—Dr. G. T. HUNTER on Diseases and Weakness of the Generative Organs, containing a popular anatomical description of the parts—contagious diseases, gonorrhœa, syphilis, &c.—their prevention and cure; chronic diseases, including gleets, rheumatism, and a new method of treating strictures; spermatorrhœa and weakness; enervation of the physical and mental powers, by the practice of secret vice or excessive indulgence; matrimony, its obligations, expectations and disappointments; with a long Appendix of prescriptions and instructions. The whole compiled with a view to affording a safe guide for self-treatment, and containing a greater amount of genuine practical information than is to be found in any work of the kind hitherto published.—Sold at 115, Fleet-street; and sent free for 2s., in money or stamps, by J. Barkley, 37, Leicester-square, London. 33

Illustrated by 26 Anatomical Coloured Engravings on Steel, On Physical Disqualifications Generative Incapacity, and Impediments to Marriage. New Edition, enlarged to 196 pages.—Just published, price 2s. 6d., or by post, direct from the establishment, 3s. 6d. in postage stamps.

THE SILENT FRIEND: a medical work, on the infirmities and decay of the generative system, from excessive indulgence, infection, and the inordinate use of mercury, with remarks on marriage, and the means of obviating certain disqualifications, illustrated by 26 coloured engravings. By R. & L. PERRY & Co., consulting surgeons, 19, Berners-street, Oxford-street, London. Published by the authors; sold by Strange, 21, Paternoster-row; Hannay, 63, and Sanger, 150, Oxford-street; Starie, 23, Titchborne-street, Haymarket; and Gordon 146, Leadenhall-street. 32

PART THE FIRST treats of the anatomy and physiology of the reproductive organs, and is illustrated by six coloured engravings.—PART THE SECOND treats of the consequences resulting from excessive indulgence, and their lamentable effects on the system, producing mental and bodily weakness, nervous excitement, and generative incapacity; it is illustrated by three explanatory engravings.—PART THE THIRD treats of the diseases resulting from infection, either in the primary or secondary form, and contains explicit directions for their treatment. This section is illustrated by 17 coloured engravings.—PART THE FOURTH contains a prescription for the prevention of disease by a simple application, by which the danger of infection is obviated. This important part of the work should not escape the reader's notice.—PART THE FIFTH is devoted to the consideration of marriage and its duties. The causes of unproductive unions are also considered, and the whole subject critically and philosophically inquired into.

THE CORDIAL BALM OF SYRIACUM is exclusively employed in treating nervous and sexual debility, impotence, &c., 11s. and 33s. per bottle.—THE CONCENTRATED DETERSIVE ESSENCE, an anti-syphilitic remedy, for purifying the blood in cases of infection, secondary symptoms, eruptions, and the abuse of mercury, 11s. and 33s. per bottle.—PERRY'S PURIFYING SPECIFIC PILLS, 2s. 9d., 4s. 6d., and 11s. per box—a certain remedy for gonorrhœa, gleet, strictures, and chronic inflammation of the bladder.—Consultation fee, if by letter, £1. A full description of the case is necessary, stating age, habits, and position in society. £5 packets, with advice, to be had at the establishment only, by which the fee, £1, is saved.—Messrs. Perry, surgeons, are in attendance daily at 19, Berners-street, from 11 to 2, and 5 to 8; on Sundays, from 11 to 1.

Sold by Sutton and Co., 10, Bow Churchyard; W. Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; R. Johnston, 63, Cornhill; L. Hill, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shillock, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Woolwich; Ede and Co., Dorking; and John Thurlby, High street, Romford—of whom may be had the *Silent Friend.*

DR. LA'MERT ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY, With 40 coloured engravings on steel.

Just published, and may be had in French or English, in a sealed envelope, 2s. 6d.; or post-free, from the author, for forty-two stamps.

SELF-PRESERVATION: A Medical Treatise, on the Physiology of Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity, usually acquired at an early period of life, which enervate the physical and mental powers, diminish and enfeeble the natural feelings, and exhaust the vital energies of Manhood; with Practical Observations on the Treatment of Nervous Debility, whether arising from these causes, close study, or the influence of tropical climates; local and constitutional weakness, syphilis, stricture, and all diseases and derangements resulting from indiscretion; with 40 coloured engravings, illustrating the Anatomy, Physiology, and Diseases of the Reproductive Organs, explaining their various structures, uses, and functions, and the injuries that are produced in them by solitary habits, excesses, and infection.

BY SAMUEL LA'MERT, M.D., 37, BEDFORD-SQUARE, LONDON. 37

Doctor of Medicine, Matriculated Member of the University of Edinburgh, Licentiate of Apothecaries' Hall, London, Honorary Member of the London Hospital Medical Society, &c.

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

Sold by Kent and Richards, 52, Paternoster-row; Hannay, 63, Oxford-street; Starie, Tichborne-street, Haymarket: Mansell, 115, Fleet-street; Gordon, 146, Leadenhall-street; or free by post, for 42 stamps, from the author's residence, who may be consulted personally (or by letter) on these disorders daily, from 10 till 2, and from 5 till 8.

Transactions of Scientific Bodies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY	Royal Botanic—Inner Circle, Regent's Park	3½ P.M.
	Westminster Medical—17, Saville-row	8 P.M.
MONDAY	British Architects—16, Grosvenor-street	8 P.M.
	Medical—Bolt-court, Fleet-street	8 P.M.
	Zoological (Anniversary)—11, Hanover-square	1 P.M.
TUESDAY	Linnæan—Soho-square	8 P.M.
	Horticultural—21, Regent-street	1 P.M.
	Civil Engineers—25, Great George-street	8 P.M.
WEDNESDAY	Geological—Somerset-house	8½ P.M.
THURSDAY	Royal Somerset-house	8½ P.M.
	Zoological—11, Hanover-square	3 P.M.
	Antiquaries—Somerset-house	2 P.M.
FRIDAY	Royal Institution—Albemarle-street	3½ P.M.
	Botanical—20, Bedford-street, Covent-garden	8 P.M.

GEOLOGICAL SOCIETY.

APRIL 25.—SIR C. LYELL (President) in the chair.

The following papers were read:—"Palichthyologic Notes, No. 3: On the Ganoidei Heterocerci of Agassiz," by Sir P. Egerton, Bart. After stating that the number of species in this family had been considerably reduced since the publication of the *Poissons Fossiles*, in consequence of the new arrangement in the Monograph of the Fishes of the Old Red Sandstone, the author noticed several new species recently discovered. Accurate descriptions of these were given, but the details cannot be abridged.

"On the Tertiary Deposits of the Moray Firth, with a brief notice of the older formations," by the Rev. J. G. Cumming. The author notices the fragments of red sandstone seen on Mealfourvonie and other mountains, which seem to have been once continuous, and states that it is probable the old red series at one time covered the entire area of Scotland, at least north of the Clyde and Forth. Subsequent denudation has greatly reduced its extent, and it has been much disturbed by the intrusion of igneous rocks, the author placing a great outburst of granite, fracturing the rocks and forming the valley of the Caledonian Canal, at the conclusion of the lias period. The boulder clay, with the scratchings on the inferior rocks, took place during a period of subsidence, whilst the drift gravel originated in a rising condition of the land. The terrace at Inverness, on which the castle stands, is stated to be identical in age with the great drift gravel platform in the Isle of Man, both being fragments of that sea-bottom, which, when upheaved, united the British Isles with each other and with the continent of Europe, and which has since been gradually eaten away by oceanic currents. The disper-ion of the boulders in certain directions is ascribed to a great current, originating probably in the union of a north polar current with a modification of the present Gulf stream, constantly setting in upon the northern and western shores of Great Britain and Ireland, with a climate of an arctic or subarctic character.

ROYAL INSTITUTION.

APRIL 21.—The annual course of lectures, by Professor Faraday, commenced this day, the subject being "Static or Franklinic Electricity." In his commencing observations, the Professor alluded to the difficulty he experienced in varying the subjects of his annual lectures, and said that he should, in the present course, return to the consideration of frictional electricity, and begin with the simplest modes by which it is excited. Taking a piece of amber, and rubbing it on his coat sleeve, he then brought it near to a suspended magnetic needle, with a gilt ball at each end. The attraction of the needle to the amber showed that the friction had in some measure imparted to it a power which it had not before possessed, though the amber had not apparently undergone any change. It was to the consideration of this power, and to its extraordinary effects, that the attention of his audience would be directed, for in whatever manner it might be excited, and how various soever the degrees in which it was manifested, the electricity produced by rubbing the amber was the same power, and was capable of being accumulated into a destructive force. The Professor exhibited several modes by which electricity may be excited, and the effects of its attraction on various bodies. The following are some of the experiments, which may be readily repeated by any one:—A glass rod rubbed with a piece of dry silk, on which an amalgam of tin, quicksilver, and zinc had been spread, was brought near two eggs, which then rolled about on the table as if they were animated. Some sulphur was pounded in a mortar, and scattered on the plate of a gold leaf electrometer, the leaves of which instantly diverged—thus proving that electricity had been excited by the friction of the particles in falling. The grinding of coffee produced a strong development of electricity as it fell from the coffee-mill. Every sort of body admitted of the excitation of this mysterious force, but none more readily than gutta percha. Most of the electrics, or those bodies which are most readily excited, are combustible substances, such as resin, shellac, sulphur, and gutta percha; and it might have been inferred from this fact, that the carbon and hydrogen which enter largely into the constitution of combustible bodies, were essential to the excitement of electricity—but this inference would be found very erroneous. Gun cotton and gutta percha were adduced as substances varying essentially in their chemical composition, and yet were two of the most easily excited electrics. The quantity of carbon, or charcoal, in gun-cotton is so great, that even when burnt in oxygen gas to effect its combustion in the most perfect manner a great quantity of smoke and soot is evolved; whereas the explosive portion of gun-cotton contains so large a quantity of oxygen, that it explodes without any smoke. The consideration of the accumulation of frictional electricity was illustrated by several experiments, the most remarkable of which was the setting fire to a jet of gas with the electricity excited on a sheet of paper. The paper, after having been warmed, was rubbed briskly with India-rubber, and then applied to a disc of metal mounted on a glass rod. The metal surface served to conduct and concentrate the electricity spread over the paper, so that a spark was emitted when the brass pipe of the gasometer was brought near it, and the issuing gas was inflamed. In the dark, flashes of light may be seen when dry paper is rubbed with clean India-rubber. The accumulation of electricity by the electrical machine was referred to, and one of the earliest forms of an electrical machine was exhibited. It consisted simply of a glass globe with a neck, which was mounted on a stand, with a handle to turn it, and without any conductor. Having shown the accumulating power of the large electrical machine belonging to the institution, the Professor next exhibited the excitement of electricity by other means than friction, as by heated tourmaline, by melted sulphur, and the evaporation of water. He concluded with some general observations on the mysterious nature of electrical force and its alliance to the other powers in nature, expressing his firm belief that all the properties of matter and the actuating principle of organic and of inorganic bodies depends on electricity.

INSTITUTION OF CIVIL ENGINEERS.

APRIL 24.—WILLIAM CUBITT, Esq. (Vice-President), in the chair.

The paper read was "On the Construction of Locomotive Engines, especially those modifications which enable additional power to be gained without materially increasing the weight, or unduly elevating the centre of gravity," by Mr. T. R. Crampton, Assoc. Inst. C.E. It was contended, that the durability of the working parts of the engine, the stability of the permanent way, and the freedom from oscillation, so essential for the comfort of travelling, all depended upon the steadiness of the engines when at high speeds. This consideration led the author to introduce several modifications of the ordinary construction of locomotives; the driving wheels were removed from the centre of the engine to behind the fire-box, placing all the weight on and between the extreme points of support. The centre of gravity was so reduced, that on the narrow guage railways the angle of stability equalled that of the broad guage engines. All the moving parts of the machinery were removed from beneath the boiler and placed on the two sides, within the easy inspection of the workmen, and enabling the repairs to be effected with ease and dispatch. These dispositions had the effect of enabling a larger amount of heating surface to be given in the boiler, within a certain length of engine, than even in the larger class of engines of much heavier weight; thus, in fact, simultaneously concentrating the power and reducing the weight. Upon this principle, some engines of a smaller class had been constructed, containing the water and coke tank within the same frame, and on the same wheels as the boiler; this arrangement became practicable in consequence of the removal of the machinery from beneath to the two sides, leaving a convenient space for the tank, and the whole weight was placed within the extreme wheels, reducing, at the same time, the centre of gravity of the mass; for it was argued, that the two points of importance were to place the weight on and between the extreme wheels, and to bring the line of traction identical with the centre of gravity of the moving mass.

These positions were illustrated by a set of diagrams, showing the various constructions of engines that had been induced by the requirements of railways, and the demands, whether for economy of fuel or increase of speed, and demonstrating that the class of engines having the driving-wheels under the centre of gravity of the boiler, was that which oscillated most at high speed; but that the class possessing the greatest amount of steadiness, was that in which the driving-wheels, and the weight which must accompany them, were removed to the hinder extremity of the engine. The paper gave the details of the various changes, and the arguments for and against each class of construction, and the author requested, that if his reasonings were proved to be fallacious, some rules should be laid down for guiding the general practice of engineers in the construction of locomotives. In the discussion which ensued, the arguments chiefly went to show that it was the length of the base, or the area of the space covered by the wheels, rather than their position, and that of the weight upon them, that induced steadiness. On the other hand, it was contended that although additional steadiness had been obtained in the old engines by thus extending the length of the base, yet that if, as had been shown to be practicable, a greater degree of steadiness could be obtained from an engine of less length between the extremities, when the driving-wheels were removed from the centre to the extremity, it was manifestly advantageous to adopt such a form of construction. This was practically instanced by a small engine, of less than 9 feet between the centre of the wheels, running with perfect steadiness at high speed; whereas, with the old class of engines, it had always been considered necessary for safety to have at least 18 feet between these centres.

It was announced that at the meeting of Tuesday, May 1, this discussion would be renewed; the paper to be read would be, "Observations on the Obstructions to Navigation in Tidal Rivers," by Mr. J. T. Harrison, M. Inst. C. E., and that the monthly ballot for members would take place.

REFORM OF THE PATENT LAWS.—A meeting of considerable importance was held last night at the Society of Arts, John-street, Adelphi, to take into consideration the most efficient measures to be adopted for securing a change in the mode of carrying out the present laws as regards patents and registration of designs. T. WEBSTER, Esq., was in the chair, and introduced the subject, by stating that the council had long had the subject under consideration, and they thought it would conduce to its advancement if a meeting of members and their friends took place, at which the opinions and suggestions of practical men, and parties who well understood the operations of the Patent Laws, could be taken. He entered at length into the difficulties and delays which patentees experienced, the enormous expenses, the want of protection, and the facility for piracy to which they were subject, and suggested that on collecting such opinions the council would be prepared to offer something tangible. Mr. PROSSER then addressed the meeting, as having had much experience in the working of the patent laws, and drew anything but a bright picture of their effects on the arts and sciences of the country. The meeting was afterwards addressed by Messrs. Newton, sen. and jun., Brockedon, Newall, Fairy, Varney, and other gentlemen, and it was at length agreed to adjourn to next Thursday week, the 10th May, when a discussion of the subject will be resumed, a full detail of which will appear in the *Mining Journal* of the following Saturday. There were about 30 gentlemen present, and although nothing really definitive resulted from the meeting, some important facts and opinions were elicited; and we believe the movement has formed a nucleus, around which will rally the scientific intelligence of the country, and by a strong pressure in the right direction, enable the council, in the next session of Parliament, to introduce a bill for a reform of the Patent Laws, backed by considerable authority.

ABERDEEN RAILWAY.—The works on this important undertaking are again in full operation. About the middle of the month there were 1575 labourers employed upon it.

RAILWAY LAW.—The right of an individual, injuriously affected by railway works, to have a jury summoned to assess the damages, if any were incurred, was acknowledged in the decision of the Vice-Chancellor of England in this case, on Thursday last. Mr. Bethel and Mr. Speed, on the part of the company, moved for an injunction to restrain the defendant from causing a jury to be summoned to assess compensation for injuries inflicted on his property by the company's works, and from suing them for a sum of 2000*l.* alleged to be due as damages. It appeared that, in extending their railway into Birmingham, they had crossed Bartholomew-street, which they had blocked up by an embankment. The consequence was, that the defendant, whose warehouse was within 126 ft. of the stoppage, had to send his carts round a considerable distance, and had summoned the company to obtain a jury to assess the damages. The grounds for the injunction were, that the company were justified by their Act, and that the defendant had not suffered inconvenience. Mr. Malins and Mr. Metcalfe for the defendant argued that, under the 6th section of the Railway Clauses Act, the defendant had a right to the decision of a jury.—The Vice-Chancellor, considering the question ought to be decided by a jury, dismissed the injunction, with costs.

GORDON'S FUMIFIC IMPELLER.—We have received a communication from our Liverpool correspondent, from which we learn, that a Mr. Rowett read a paper, at the last meeting of the Polytechnic Society, on Mr. Alexander Gordon's proposed plan for propelling vessels by the direct action of the products of combustion against the body of water in which the ship floats. We noticed this invention at some length in the *Mining Journal* three or four years since, and had considered it to have been almost obliterated, as our opinion then was, and still is, that it never can be brought into economical practical use. Mr. Rowett, however, is of a different opinion: he implied that Mr. Gordon took his idea from the action of the rocket. In alluding to the currents of the hot products of combustion, which may be discharged at once under water backwards to impel the vessel forwards, and forwards when it is required to back, he observed, that these currents, being permanently elastic, do not collapse as steam does; and being tenacious of their heat, the necessary impact can be had to move the ship in her course, without the aid of any complicated and costly machinery. Rockets are impelled without any machinery. The locomotive power of rockets is had by the direct application of the hot products of combustion themselves for impelling these bodies in air or in water, without the intervention of machinery; and it is by making use of *all* the heat generated, and all the heat put in motion, that Mr. Gordon feels convinced he shall in practice obtain the desired results. He employs two furnaces, and, by opening the top bonnets one before the other, once in 3 hours and 44 minutes, a sack of fuel 224 lbs. weight could be shot into each, the furnace bonnet luted tight again, to remain so for 3 hours and 44 minutes, and by this mode of arrangement the consumption of fuel is stated not to exceed 3 lbs. per horse-power in practice—thus effecting a saving of fuel, which of itself must recommend and ensure its general adoption. But this is only one item in its economy—for such an apparatus of 20-horse power would not cost more than 350*l.* to 400*l.*, a mere trifle compared with a steam-engine, with its complex machinery, paddles, &c. In the experiments made by Mr. Gordon on the Thames, he employed a vessel 26 ft. long, 4½ broad, and weighing, with its furnaces, &c., 4375 lbs. Each stroke of the bellows sent sufficient cold air into the furnaces to supply oxygen for the support of combustion, and the heating of all the æriform body, which passed off under water, was immediate. The products of combustion alomst altogether æriform, but also occasionally mixed with smoke, dust, and ashes, rushed out under and against the water at a very high velocity, at a temperature of 8000 or 9000, and impelled the vessel in her course at a speed equal to the power (he says) of two men rowing, though only one man was employed at the forge bellows. In this experiment, it must be remembered, the heat of the furnace was not applied to reproduction of steam—that would have rendered the man at the bellows unnecessary. Mr. Rowett considered the experiment of much more value than if steam had been applied, because the power of one man over a vessel of such dimensions was much more easy of comparison.

THE ELECTRIC TELEGRAPH COMPANY.—We learn, from a letter addressed by Mr. Ricardo to the *Times*, that this company have established a system of no ordinary complication and extent. Their wires stretch from Glasgow on the north to Dorchester on the south, from the east coast at Yarmouth to the west at Liverpool. They have brought upwards of 150 towns into instant communication with each other. They have a central office in Lothbury, London, and five branch receiving-houses in various parts of the metropolis; and from the main station at Lothbury their wires (carried at great cost in iron pipes under the streets) diverge to every town of importance in the country. In the metropolis alone they have upwards of 60 persons in their employment, and at each of their country stations they have, independently of messengers, not less than two, and in many cases as many as ten signal clerks, all of them skilled in manipulating and interpreting the telegraph. The wires which they have set up for the use of the public alone are upwards of 9800 miles in length, and extend over a distance of 2060 miles, and, exclusive of those running under ground and through tunnels or rivers, are stretched on no less than 61,800 posts, varying from 16 feet to 30 feet in height, and of an average square of eight inches, with an expensive apparatus of insulators and winders attached to each

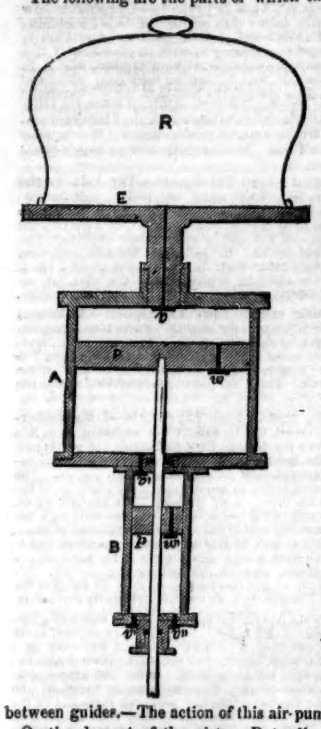
THE ELECTRIC TELEGRAPH.—We noticed, in last Journal, that all communication by telegraph on the South-Eastern line had been interrupted, from the effects of a violent storm on the previous Thursday—several of the posts on which the wires were extended being laid prostrate.—Mr. C. V. Walker, the superintendent, has since forwarded the following particulars, in explanation of the occurrence:—"Certain damage occurred to the telegraph poles in some districts of this railway from the snow-storm of Thursday last, between Pluckly and Ashford, Hythe and Folkstone, and especially between Ashford and Hythe, and to a small extent elsewhere. The peculiar circumstances of the case deserve a place in the history of meteorology. The day opened with heavy driving rain and much wind; before noon there was a slight respite, which gave place to mingled snow and rain, that continued throughout the greater part of the night. All was well until 6 P.M., and probably later. Frost now attended the snow, and it began to congeal with the rain about the telegraph wires. This process continued until the wires along their whole length were each enclosed in a coating of snow about the thickness of a man's arm. This accumulated weight required little aid from the wind (which, indeed, blew a gale) to bear down the poles. Before midnight some 60 or more poles, either singly or in sets of two, three, and in some cases four or five, were broken short off at the ground, and as many more were overthrown. I visited the various scenes of the accident the following morning, and from the examinations I was able to make of the snow cylinders, I believe that each yard of wire was surrounded by not less than 10 lbs. or 12 lbs. of congealed snow. Each pole had to sustain a weight of from 2000 lbs. to 3000 lbs., and in some cases double this. In places where the poles withstood the pressure, the wires were so extended by the weight as nearly to touch the ground. On the snow leaving them they nearly recovered their original position—an interesting proof this of the value of iron wire. In the cases where lengths of copper wire were exposed, they have not recovered their original position. The district between Ashford and Hythe felt the storm most, and presented all the features of mid-winter. Thunder and lightning occurred near the coast during the night."

THE HYDRAULIC TELEGRAPH.—At the Mechanics' Institution, Manchester, on Saturday last, Mr. French delivered a lecture "On the Comparative Merits of the Electric and Hydraulic Telegraphs," illustrated by models and diagrams, the principally important points in which were the endeavour to prove the superiority in point of certainty and correctness of the hydraulic over the galvanic telegraph. Having fully explained the various difficulties to contend with in the use of the battery, the numerous accidents to be prepared for, such as high winds, breakage of posts, twisting of wires, &c., and the numerous errors which he knew to have arisen from the complex arrangement of signals, and the want of an efficient means of spelling and reading off from a simple complete alphabet, he proceeded to describe the hydraulic telegraph, which, as we have on former occasions stated, consists of two cylinders, one supposed to be at each of the two stations, connected by a water-tight tube; in each cylinder is a free moving piston surmounted by its rod, connected to which is the index or pointer, running up and down a graduated scale. That used by the lecturer was the complete alphabet of 26 letters, a sign for "stop," and the ten numerals. He pointed out, and described how, by an arrangement of his invention, any letter could be pointed out with facility and rapidity, by a simple movement, and words could be spelt and read off with scarcely the probability of error. It was also possible to represent entire words, and every letter might be used as a station signal. Mr. French explained the modes of preserving the water from frost, ascertaining the point at which any accident may have occurred and leakage taken place; he also stated that he was about to take out a patent for a plan by which he should be able to print, not as done by Mr. Brett, which were merely marks in a straight line and required the assistance of several persons, but which might be carried on although no person was at the station to which the message was to be sent. He could also communicate with any number of stations, or select any particular one from the whole. He said the expense of the electric telegraph system, where the wires were suspended, had been about 260*l.* per mile, and was now, he believed, about 200*l.*; but the cost of the street work was 616*l.* per mile. The hydraulic system would cost 60*l.* per mile, and would not be a suspension but a subterranean plan. At this cost, ½ in. tubes would be laid down. He had a tube that would resist a pressure of 300 lbs. to the square inch, or equal to an altitude of 600 ft.; and where was there a railway possessing such unfortunate circumstances? He must decline to state what the tube was composed of; but within about six months the specification would have been obtained, and he should then be most happy to give every information. With the exception of printing, we do not see anything particularly new in the explanations given by Mr. French, or anything but what is provided for in the various ingenious appliances under, Whishaw's system.

SIEMENS'S IMPROVED AIR-PUMP.

The object of the various improvements hitherto effected in the air-pump has chiefly been to obtain a more perfect vacuum, to lessen the amount of leakage, and other hindrances to rarefaction, and to diminish the labour required. A new air-pump has, however, been recently invented and patented by Mr. C. W. Siemens, in which one essentially new feature, or, as it is termed in the printed statement, a new principle, is introduced. This new instrument consists of two cylinders, differing in magnitude, the valved pistons belonging to each respectively being attached to the same piston-rod. The air withdrawn from the receiver is condensed in the lower cylinder into one-fourth of its volume, and, consequently, possesses sufficient elasticity to pass through the discharging valve, and escape into the atmosphere, the opposing pressure of which is thereby counteracted.

The following are the parts of which this instrument consists, as described by Mr. Siemens, and shown in the annexed sectional view:—



The exhausting cylinder, A.—A second cylinder, B, equal in length to the first; to the bottom of which (in the form of the instrument here represented) it is fixed, but having only one-third or one-fourth of its sectional area, and only one-third or one fourth, therefore, of its cubical contents. The cylinders are separated by a plate forming at once the bottom of the upper and the top of the lower cylinder, the only air passage between them being a silk valve, *v'*. In each cylinder works a valved piston, P and *p*, attached to a piston-rod common to both, which passes through a stuffing-box in the plate. The distance between the pistons is such that when P is in contact with the top of the upper or exhausting cylinder, *p* is in contact with the top of the small or lower cylinder; and when P is in contact with the bottom of the large cylinder, *p* is in contact with that of the small cylinder. The pump-plate, E, placed above the large cylinder, A, supports the receiver, R, or other vessel to be exhausted, from which the air flows through the valve, *v*, during the descent of the piston, P.

In the complete pump, the motion of the pistons is effected by means of a short crank with a jointed connecting rod, converting the circular motion given by the lever handle into a vertical one, which is maintained by means of a cross head, with rollers working between guider.—The action of this air-pump is as follows:—

On the descent of the piston, P, tending to produce a vacuum in the exhausting cylinder, A, by causing a difference of pressure above and below the first valve, *v*, in the top of the cylinder, the elasticity of the air in the receiver causes it to pass through the valve, *v*. The air below the piston, P, is at the same time pressed through the valve, *v'*, in the plate separating the cylinders, and enters the cylinder, B, in which a vacancy is simultaneously made for it by the descent of the piston, *p*, and in consequence of the difference of capacity of the two cylinders, it becomes reduced to one-fourth of its original bulk, its elasticity, according to the well-known law, being proportionally increased. The air contained in the small cylinder below the piston, *p*, will in like manner be pressed through the valves, *v*, *v''*, into the atmosphere. During the ascent of the pistons, the valves, *v*, *v'*, *v''*, will be closed, and the valves, *w w'*, in the pistons opened, by the upward pressure of the air in the cylinders and atmosphere, admitting the air in each cylinder to pass through the pistons as they rise, in order that, in the following downward movement, the air, which during the previous stroke of the pump issued from the receiver into the exhausting cylinder, may be withdrawn from that into the lower cylinder, while the air condensed in the latter may be finally expelled into the atmosphere. By this construction of the instrument we are enabled to obtain a more perfect vacuum than by any air-pump previously devised.

The inventor draws a comparison between the action of the new air-pump and one of the ordinary construction, with a view to show that, by the addition of the second cylinder, the vacuum may be rendered ten thousand times more perfect than if the cylinder, A, had been employed alone, in the manner of an ordinary air-pump. The possible objection that the employment of two valves and one piston more than usual would occasion greater loss of effect than caused by the ordinary air-pump, is met by the statement, that the loss from leakage at the valves and pistons is diminished in the new air-pump nearly in the same ratio as the opposing unexhausted space in the cylinder. "The amount of leakage through a given aperture," says Mr. Siemens, "bears a certain proportion to the difference of pressure on each side; and this difference of pressure, especially in the large cylinder, is very small indeed, and occurs at intervals only; whereas, in the case of an ordinary single-acting pump, the entire atmosphere constantly rests on the piston and exhausting valve. Besides, in the new air-pump the leakage of the air through the apertures is opposed by a greater number of obstructions, one after another, between the discharging valve and the receiver." A defect incidental to the ordinary air-pump, arising from the irregularity of the force required to move the piston through different portions of the stroke, is obviated in this improved air-pump, because the resisting pressure against the larger piston cannot rise at the termination of the stroke to more than four times the pressure of the air contained in the receiver, and, therefore, diminishes as the perfection of the vacuum increases. The application of a crank, to give motion to the pistons, is also a practical advantage of the new invention.

MUTUAL LIFE ASSURANCE—THE SCOTTISH PROVIDENT INSTITUTION.

The vast increase in the number of institutions in this country for the assurance of human life during the past quarter of a century, is one among the many extraordinary advances in civilised society which has marked the present age. The more modern of these establishments have founded their calculations on far more liberal data than those originally established, and hence the increased attention which has been paid to the principles of life assurance by all classes of society, and the corresponding increase in the number assured—a number so large that, notwithstanding upwards of fifty new assurance offices have sprung up in the last twenty years, still most of them can boast an increasing and profitable business.

Among these we may with justice allude to the above-named institution—one which came before the public on the most liberal principles, and which has reaped in consequence a corresponding plentiful harvest. From the proceedings which took place at the eleventh annual meeting, held in Edinburgh, we find that 1848—a year so disastrous to every interest throughout Europe—was absolutely, with one exception, the most prosperous of this society; no less than 430 new policies were issued in that year, at the end of which the amount of assurances was upwards of 1,250,000*l.* sterling. For such extraordinary success there must be a cause, and a most satisfactory one we find on a reference to the constitution of the society. In the early years of the institution, and, indeed, up to 1848, they were merely a private commercial body, as far as they were affected by the laws of partnership, but from their rapid increase in business it was found necessary to apply to Parliament for an Act of Incorporation. This was obtained during the past year, and by it most valuable powers and privileges were obtained.

The society is established on the mutual principle, with low premiums; there is no commission paid to agents, and the assured has the highest practicable security, consistent with the safety of the institution, for the attainment of their object. Among the advantages conceded to the assured, we may mention, with respect to averments made at the time of assuring, the directors have decided that there shall be no forfeiture unless the averments shall prove to have been fraudulent and untrue; the policy of an assurer who falls in a duel, or by the hand of justice, is still to remain in full force—the directors wisely considering that duelling is the remnant of a barbarous age, and that capital punishments have been so far lessened that, as to their influence on, or injury to, assurance offices, they may be considered extinct; while in those cases where an assured falls by his own hand, a modification has been decided upon by which the policy is not be forfeited, unless he is found *felo de se*.

A branch of this highly-popular institution has been established more than three years in London, progressing with the most satisfactory success. In reviewing the history and progress of the institution, it is impossible not to see the wisdom of all public institutions modifying their rules and regulations in conformity with the advances of the period in which they flourish, and in adopting a course of liberality in their proceedings, which shall distinguish them from those societies which carry on the face of them, however disguised, the shadow of a remnant of a darker age.

THAMES TUNNEL COMPANY

The number of passengers who passed through the Tunnel in the week ending April 21, was—No. of passengers, 14,512.—Amount of money, £60 9s. 4d.

Original Correspondence.

IRISH MINES—CORK MINING DISTRICT.

SIR,—Having seen in your Journal of the 10th March an excellent article on the subject of mines and railways, signed "Placer," I have taken the liberty of forwarding you a hasty sketch of the mining districts of the county of Cork, which, if you think deserving a place in your Journal, I will thank you to insert. I perfectly coincide with "Placer" in his views, as to the superiority of mines as a safe investment of capital when compared with railways; and if we look back a moment to the last three years, and calculate the enormous sums swallowed up in railways, the most infatuated follower of King Hudson must acknowledge that railways consume vast quantities of gold, and give back very little hard cash in return. For the present I shall confine my remarks to the districts of Ballydehob, Schull, Mizen Head, Three Castle Head, and Sheep's Head. In the neighbourhood of Ballydehob are the celebrated Audley Mines, comprising Cuppagh, Ballycumisk, and Horse Island. These mines were formerly worked, as many an individual knows to his cost, under the name of the West Cork Mining Company; large sums of money were expended in working slate quarries by this company, but the water was not forked out of the old mine. Rich copper ore to the amount of several thousands of pounds was shipped from Horse Island, and raised without the aid of any machinery except a *grass tackle* (common windlass), and if we may judge from the large specimens of ore now forming the hedges at Ballycumisk, there is reason to suppose that there are more where those came from—in fact, the operations appear to have been confined to two or three small shafts, from which, of course, they had to draw all the stuff and water to surface, whereas had they commenced operations in a valley near at hand, and driven an adit on the course of the lode, it would have drained and proved the same to a depth of about 30 fms. Doctors of Divinity, however, captains in the Royal Navy, or London attorneys, may not be the best judges in such matters. The strata in which the lodes in these mines are found consist of soft whitish clay slate or killas, intersected by elvan formations, slides, and cross-courses. Scientific men will tell you that there is no elvan in those districts, but "Cudden Jacky" pronounces to the contrary, and I am inclined to agree with the latter authority in preference to the former. The lodes of Cuppagh, &c., are without difficulty traced westward a distance of four miles, through Russbrin, Kilbronogue, Dreenatra, and Ardentennant, to Coosheen Mine, at the eastern side of Schull Harbour. Dreenatra is about midway between Coosheen and the Audley Mines, and about four years ago a slight trial was made on one of the lodes at Dreenatra, from which 60 tons of ore were raised, and sold at 3*l.* 8s. per ton, stoped opencast from surface. The proprietors of the concern were about to enter into a lease with the proprietor in fee, with a view to the effectual working of the mine, but that gentleman being one of a numerous class of nominal owners of land with which this country so plentifully abounds, and wishing to insert some extraordinary and unreasonable clauses in the lease, the company very wisely allowed him to keep his mine to himself, and it has since remained in *statu quo*. Operations in Coosheen were first commenced about nine years ago; several deposits of ore of an exceedingly rich quality were discovered, and instead of forming a capital from the proceeds of the sales of ore, dividends were made, and the *eyes of the mine picked out*; and when further capital was required to develope the resources of the mine by cross-cutting parallel lodes, sinking under the deep adit, and extending the drivings in different directions, those who had pocketted the dividends were loth to disburse, and the mine, consequently, was thrown upon its own resources; and though returns to the amount of many thousands of pounds have been made, it remains untried and *unproved*. A few days before the workings ceased, a new lode was discovered at the deep adit level (in whole ground), from which several waggons of rich ore were broke; the main lodes from which the greatest quantity of ore was taken have not been proved below the adit level, and if we may form an opinion from the quantities of rich ore already produced, and judging from analogy, we may reasonably expect to find large deposits of ore at greater depths. The quantity of water in all the mines in those districts is very small, and a depth below the deep adit of 35 or 40 fms. in Coosheen may be easily attained by the aid of small lifts of hand pumps; railways are laid down in all the principal levels, dressing-floors, surface erections, &c., complete, with a supply of materials on hand, and every facility for commencing operations at an hour's notice. Probably some of the railway speculators would find this a safer investment for their capital than *steep gradients* and *sharp curves*.

About 12 miles south-west of Coosheen, is Crookhaven, formerly a noted place for its fisheries; but now a miserable and wretched hamlet, with cabins in ruins, and crowded with starving human beings. Indications of copper having been seen about half a mile south of Crookhaven, Mr. Foley was induced to make a trial, some three years ago, on one of the lodes. Some good specimens of ore were found; but from some cause or other—probably a scarcity of cash—the mine was, and is, still suspended. Four miles west of Crookhaven, the Mizen Head (a bold and lofty promontory) jets out into the Atlantic Ocean. Several large lodes are visible in the face of the cliffs—from one of which, many years ago, a considerable quantity of ore was raised by the late Colonel Hall. An adit was recently commenced at the base of the cliff, on this lode, and extended some 70 or 80 fms. on its course eastwards (inland); the strata is similar to that before noticed, and favourable to the production of mineral. The present proprietors are sinking below the deep adit; the lode is from 9 to 12 ft. wide, composed of quartz, a large quantity of mundic, and good stones of ore—in fact, the general features of the lode are such as would lead any person, competent to form an opinion, to expect that large deposits of ore would be found at a greater depth. Several tons of ore have already been dressed from the lode now at work. Three miles north of Mizen Head, is Dhurode Mine; this is also a mine of great promise; and, although the operations were carried out on a very limited scale, several cargoes of ore were shipped and sold at Swansea. The greatest depth reaching below deep adit is 20 fms. About two years ago, preparations were being made for working the mine on a more extensive scale; but the principal shareholder died, and very little has been since done. There is a good dressing floor, surface erections, and everything complete for resuming operations. Three Castle Head is about a mile west from Dhurode; four miles north of Three Castle Head is Sheep's Head, which is divided from the former by Dunmannus Bay. Ten miles east of Sheep's Head is Gurtavallig Mine, situated on the south shore of Bantry Bay. Several large lodes having been discovered, about three years since, in the cliff, of a very promising character, a company was formed for working the mine, which subsequently merged in the Southern and Western Mining Company of Ireland, and for which a Royal Charter of Incorporation has been obtained, limiting the liability of each shareholder to his own shares only. This place was remarkably wild and picturesque, and almost inaccessible. There was, consequently, a vast amount of preparatory work necessary to be performed before any mining operations could take place. Two large piers, or sea walls, were built, and the space thus wrested from the Atlantic Ocean filled with immense rocks from the overhanging cliffs, upon which a convenient dressing-floor has been made, and suitable buildings for mining purposes erected against the pier walls. The place is now completely sheltered, and the dressing-floors immediately at the mouth of the deep adit, where the stuff is trammed by waggons, and the ore prepared for market. This mine was begun with great spirit; and, from the general characteristics of the lodes, if followed up with spirit, would very probably, ere this, have become a valuable concern. A deep adit cross-cut had to be driven 20 fms. through hard ground to reach the lode; and in 16 months from the time the first stroke was struck in the deep adit cross-cut, the lode was intersected, and 87 tons of ore raised, dressed, and shipped for Swansea, which, at the then miserably low standard, fetched upwards of 3*l.* per ton. Unfortunately, however, mines—particularly new mines—cannot be worked without capital; and the country being overwhelmed and paralysed with the effects of the late famine and other causes, many of the shareholders who were well able at the commencement, are now unable to respond to a small call to carry on the operations of the mine; and the consequence is, that the mine was almost suspended before it was *began*. Everything is in good working order, with a valuable supply of materials; and the mine could be worked 40 fms. below the deep adit without any machinery but hand pumps, not even a whim would be required; so that whatever capital might be subscribed, all the preparatory work having been accomplished, every farthing would go to the actual working of the mine. Three miles east of Gurtavallig is Killeen Mine; there are several lodes in this sett—one of which has been selected for trial. Its size or breadth has not yet been ascertained; but in one spot a shaft has been sunk nearly 8 fms. deep from surface; the lode is composed of galena, quartz, and mundic, spotted with ore. In sinking the shaft in question, between 50 and 60 tons of solid mundic has been raised. This lode is what is technically called a caunter; it intersects, or cuts, the strata, the range of which is about due east and west, at an angle of about 45° or 50° south of east. Several east and west lodes, presenting strong indications of copper, as seen in the cliffs, fall into it; and will, it is conjectured, act as so many feeders, or tributary streams, to the main river. An adit was commenced, and is now being driven, for the purpose of proving the caunter lode, and also the junction of the east and west lodes, as well as for draining the surface water. The adit will soon reach a considerable depth—the direction of the lode being obliquely through the mountain, which separates Bantry Bay from Dunmannus Bay. This promising concern is being worked by three private indlviduals; and there is every reasonable prospect that their spirited exertions will be crowned with great success. It should have been remarked, that the main lodes, both at Gurtavallig and Dhurode, are caunters, and also intersected by east and west lodes.

The Audley Mines and Coosheen districts are four miles south of Ballydehob; but, in a range of mountains four miles north of Ballydehob, the Derrycarhoon and Shronagree Mountains, several rich deposits of grey ore have at different times been found, and at the former place some ancient workings, supposed by learned antiquarians to have been excavated by the Danes, were recently discovered, in which were found stone hammers, and other rude instruments or implements of by-gone days. A piece of notched oak was also found, which it was supposed answered the purpose of the modern ladder; no trace of borer holes was seen, and the excavations were made about 6 fms. deep, and from 10 to 12 fms. in length; every particle of the lode was scooped out, and nothing left but two regular walls. These excavations in course of time filled up with peat from the adjacent mountains, in which was found a quantity of pure copper, precipitated probably by the action of the acid and iron in the peat, and copper in solution exuding from the lode.

I have thus rapidly taken you through a considerable part, and the most mountainous part, of the county of Cork. I have attempted hastily to describe the Coosheen and Audley Mines district, Crookhaven, Mizen Head, Dhurode, Gurtavallig, Killein, and Derrycarhoon and Shronagree; and I believe that, in this hasty and imperfect description of those districts, I have given a faithful account of all the mines; but it may be asked, why is it, if the mines in question hold out such prospects of speedy and certain returns, that Irishmen do not work them? The answer is easy—viz.: the absence of *perseverance* and *capital*. We are surrounded with a starving population; in the union of Skibbereen alone there are nearly 20,000 paupers, receiving what is called out-door relief, and which is only just sufficient to prolong a lingering death. The general allowance is about ¾ lb. of Indian meal for a grown person per diem; this, I need not say, could not possibly support a man. True; but the people have a friend in the rocks on the seashore, where you may see them in scores devouring shell-fish and *sea-weed*. But would Englishmen and their capital be safe in so miserable a country?—undoubtedly, both the one and the other would be as safe, perhaps safer, than in Cheapside. I speak from experience, and feel no hesitation in stating, and I do so without fear of contradiction, that a more peaceable or well-conducted people than the inhabitants of the western part of the county of Cork cannot be found. Labour is to be had at any price—in fact, there are thousands, who, if they offered to work *for a farthing a day*, could find no employer with *that farthing* to give them. The mines and districts to which I have alluded will bear inspection, a comparatively small amount of capital would prove them, there being no necessity, as is the case in Cornwall and Devon, for a large outlay for machinery; returns would begin to be made from the first day of working, and I believe, generally speaking, nothing of the kind is to be found in the United Kingdom. We have listened long enough to the humbug of "Repeal of the Union;" what we want is a *real union*—come over, then, and help us! the people will bless you, and the mines reward you for so doing.—ANGLO-CELT: *Mount Gabriel, April* 20.

MEXICAN DIVIDEND—MESSRS. SCHNEIDER AND CO.'S LETTER.

SIR,—Messrs. Schneider and Co.'s letter, in the *Times* of the 19th inst., in defence of their extraordinary attempt to charge the Mexican bondholders with interest on the ¾ dividend now in course of payment, does not in any shape mend matters. It only makes the previous confusion the worse confounded. It gives no satisfactory explanation why that which was pronounced impossible in September last has become possible in April. It does not tell us why the honest construction put on Messrs. Schneider and Co.'s agreement by the accredited representative of the Mexican Government is wrong, and why the Messrs. Schneider's construction, so very convenient for themselves, is right; neither does the letter state why Messrs. Schneider and Co. omitted to make an appeal to the Mexican Government the *moment* a difference of opinion with the Mexican Minister was found to exist.

Senor Mora's construction—"that the moneys remitted here were on account of the bondholders, and that his Government had nothing to do with such remittances"—is perfectly reconcileable with Messrs. Schneider and Co.'s agreement with the Mexican Government to allow interest, from time to time, upon such moneys as might remain IN their hands. The evident object of such a clause is to increase, by interest, the amount of money applicable to the payment of dividends; but when the moneys are OUT of the London agent's hands, and appropriated to the purpose for which they were sent over, then, and in that case, for Messrs. Schneider and Co. to call the part payment to the bondholders of their own money "AN ADVANCE," and to insist that interest at 4 per cent. should run on against the recipients until a certain, or rather an uncertain, event occurs, is to display as great an ignorance of the legal bearings of the case as it does of the moral obligation.

It is pleasant, however, to turn from these pitiful quibbles, and congratulate the New Granada bondholders on the very different treatment they receive from Messrs. Baring and Brothers. This firm has on two occasions advanced money to make up the amount required for the payment of a dividend, and has lately advertised the payment of four-fifths of a dividend, or, in other words, proposes to pay to the full extent of the moneys in hand. Messrs. Schneider and Co. pay three-fourths of a dividend, charge interest on such payment, and, according to their own showing, keep a balance in hand of 36,750*l.* But it may naturally be asked, what has the committee of Spanish American bondholders been about all this time?—An echo answers, what indeed! For the committee has not publicly protested, even with "bated breath," against this monstrous injustice to the Mexican bondholders; and if the tactics of the committee are not exactly the tactics of a once popular orator at Athens, of whom it was said, "that those he knew to be wolves, he took care not to bite; while the sheep he professed to guard, he was the very first to devour," yet it has so often shown itself inert, when activity was called for, and is so unaccountably silent on the present occasion, that its reorganisation, on a more efficient basis, seems to be imperatively required.—C. R.: *Charles-street, St. James's, April* 25.

P.S.—Since the above was written, I have read in the *Times* of this morning (the 26th) a correspondence transmitted for publication by the committee of Spanish American bondholders. Messrs. Schneider and Co. now give up their claim to interest on the part-paid dividend, on the ostensible ground of some new communication from the Government of Mexico; but as it is pretty evident that the bondholders are mainly indebted to the censures of the public press for this resolve, I think the comments I have made on Messrs. Schneider and Co.'s letter of the 19th inst., may yet appear with benefit to the interests of the bondholders.

DUISBURG IRON-WORKS AND MINES.

SIR,—Being a speculator in different mines at home and abroad, my attention is in general drawn to each new project as introduced, especially if in the prospectus I see there is a feasibility of the adventure returning a fair interest to the subscribers for the capital they risk in the undertaking. From the advertisement in your Journal of the "Duisburg Iron-Works and Mines," I had, some short period since, an intention of applying for shares in that company, believing, from the prospectus, that it was likely to return a fair and remunerative profit to the shareholders. My ardour has been damped somewhat lately by information which has been conveyed to me from a gentleman who has long resided in the district where the property is situated. He states that the iron mines are situated above 100 miles from the proposed site of the works, and these not of any great extent; that the carriage of the ironstone to the proposed furnaces would cost at least 15s. per ton, and limestone from 2s. 6d. to 3s. per ton; that some time since, when the price of English iron was so high, some parties in the district contemplated trying the experiment of making pig-iron from coke in this very neighbourhood, but nearer the coal-field; that a French company actually, last year, did erect two blast-furnaces in the coal-field, but on the fall in English iron abandoned them; that so far from it being a profitable investment, the ironmasters in the neighbourhood ridicule the idea of making pig-iron at the rate of 40s. per ton. In my correspondent's opinion it would never answer, unless carried on on a small scale, and then only when the price of iron is much higher than at present. Since receiving this statement, I have been in a dilemma how to act, it being so entirely opposite to those put forth in the advertisements in your Journal. As it is through your medium the company has been made public, I trust you will excuse me in asking you whether you think this account is to be relied on; likewise to inform me where I can obtain some disinterested information as to the real prospects and situation of the works of the company, and whether you consider it to be a safe and profitable investment? In so doing you will oblige your constant reader—AN OLD MINE ADVENTURER: *Birmingham, April* 21.

[We cannot be responsible for the statements contained in the advertisements we insert, nor do we at any time recommend particular investments. The parties connected with the Duisburg Iron-Works are, we believe, highly respectable and honourable men, and we have inserted our correspondent's letter, in order that they may be able to remove any misapprehension, or misconception, under which he may labour.]

BLAENAVON IRON AND COAL COMPANY.

SIR,—Your correspondent, "Old Blorenge," in last week's *Mining Journal*, attempts sadly to mystify the matter relating to the altered system of operations now carried on at the Blaenavon Works. It is perfectly true, that Mr. C. Hampton, to whom I expect he alludes, advised the erection of ovens to coke the small and crushed coal, which I pointed out to him was left buried in the workings; but with respect to the rejected veins to which I have specially alluded—viz.: the Meadow vein, the Boddellogg vein, and the Horn vein—Mr. Hampton was not aware that they were left untouched, having been scarcely worked at all since the foundation of the works. I had recommended them to be used years ago; and my predecessor in the coal management had given a like opinion 40 years since; but neither of us got anything but frowns and sneers for our pains. I called the attention of Mr. Hampton to these coals: he desired me to get some coked for him to see, which was done, and with which he was perfectly satisfied. "Old Blorenge" would lead to the inference, that the inferior coals can only be used by coking in ovens, which, if he knows anything of the proceedings here, he must know is anything but correct. More than 1000 tons per month of Boddellogg coals have been coked by field coking, and the result is declared to be excellent fuel by every one unconnected with the prejudiced few; and the late working of the furnace proves it to be so. It is the small and crushed coal before-mentioned which is alone coked in ovens; and that used to be buried and lost, until Mr. C. Hampton recommended the ovens under notice, and which makes still better coke than the large coal in open air coking. It is from the conviction I have

expressed of the value of these coals, and my recommendation, that the saving of 4000*l.* or 5000*l.* a year is now being effected; and it is but common justice to myself to state this, and that the exposure I made has led to measures which will prove the salvation of the company, and render the operations remunerative to the proprietors.—THOMAS DEAKIN: *Blaenavon, April* 24.

THE BLACK CRAIG MINE.

SIR,—The pitwork drawn, cleaned, and reset, and the water pumped out, certainly has nothing to do with either cutting down Welsh's shaft or opening out the engine-shaft above the adit; and by looking at the nature of the rock at surface, and also in the adit over the engine-shaft, I am fully convinced my estimation is but very little astray. I find your correspondent is not exact in the depth of adit—84 fms. is the depth (proved by dialing) to the bottom of the adit level; then taking out 3 fms. for a rise cut up, over the shaft, above this level, leaves only 81 fms. to hole in.

"A Friend to Mining" says, Welsh's shaft stands in the centre of the known productive ground; I say, the engine-shaft stands west of Welsh's. The productive ground has been confined betwixt these two shafts below the adit, and to the east of Welsh's above the adit, thrown west in depth by a natural underlay with the rock on each side. By sinking the old engine-shaft to a 60 fm. level, as should be done to prove the mine, and the ground prove productive to that depth, this shaft then would be in the centre, instead of Welsh's. How is it possible, then, Welsh's shaft should stand in the centre of the productive ground, when the bottom level is only extended 5 or 6 fms. east of Welsh's shaft, and scarce anything done below the adit east of Welsh's?

Welsh's was once convenient to the centre of the productive ground about the adit level, but the former company, being also anxious for mineral, took it away, and filled up the the working with rubbish; so if rubbish be productive then Welsh's is yet in or about the centre.

In putting down pitwork, I never understood that managers ever troubled themselves about it, when provided with an ingenious pitman. A MINER.

Newton Stewart, April 23.

MODUM BLUE COLOUR-WORKS.—The undersigned Administrator of the Estate of the Company, carried on under the firm of "Modum Blue Colour-Works," gives provisional notice, that according to the order of the Court, held on the 16th of March, 1849, the MODUM BLUE COLOUR-WORKS, situate in the bailleship Buskerud, kingdom of Norway, with all the mines, buildings, houses, forest, saw and flour mills, &c., appertaining to it, will be SOLD by public SALE, in the latter part of the month of June. The following information of the mines and works has been principally given by the mining director of the bailleship, who, under Royal sanction, has for many years directed the operation of the mines and pool works. The considerable layer of ores on which the Blue Colour-Works and mining operation are conducted, is situate nearly on the highest part of the Skuderup Aas. The principle and richest mines are situate on the Grange Skutterud, belonging to the works, and only the most southerly and the most northerly part of these layers lie on other property. The mines show no want of cobalt ores; those now worked, namely, the middle and north mines, yield just at present an unusual quantity of rich ores. There is no reason to assume the cessation of the layer of ores; on the contrary, there is every indication that there are plenty of ores for continued mining operations for a number of years. The most important mines are joined by trenches covered by rails, offering an easy transport to the ores. The mines are provided with the necessary buildings; to the work belong, besides different schürfe (layers of ores at the surface), situate in the parish of Modum, principally at Snarum. On the Grange of the works Fossum, near the river Hongfos, are the principle pool works; 54 stamps have rendered annually about 27,000 barrels of ore. The work has besides four stamping mills in the valley Skutterud, with 33 stamps, driven by the Skutterud rivulet during several months of the year, and provided with four dams for stowing the water. The smelting-house and appurtenances, are situate at Fossum, well provided with every thing for the manufacturing of smalt and cobalt oxide; has of late received in addition a smelting-house, provided with two shaft furnaces, cylinder, blowing machine, &c. The buildings, stamping mills, smelting-houses, and appurtenances, have been valued for insurance against fire by Government, in the year 1846, at 102,230 sps., about £ 22,720; the other buildings at 48,050 sps. The whole of the buildings is at present insured for 149,110 sps., about £33,132*l.* The stock of materials to be sold in conjunction with the works is considerable. The stock of ore at the mines and stamping mills, and the stock of schliche and materials at the smelting-house, are valued at the lowest estimate at 30,000 sps. The building of the works on the Granges of Fossum and Skutterud, as well as on the share of Aslaksby belonging to it, are taxed at 45 th. 4 ort. 14 shs. Besides well preserved buildings for the officers, there are a great number of houses for the workmen.

The works possess three flour-mills, two saw-mills, driven by water, a canal for timber at Simoa Elv, and canal for floating masts at Hongfos, through which all timber going by the River Simoa must be floated. These properties are of considerable importance; the situation of the work is very advantageous—hardly one mile from the mines, to which a good road leads: it is secured against want of firewood by the extensive forest of Sigdahl. The River Simoa Elv facilitates the carriage of these materials, and places at the disposal of the work the large water-power, which drives as well the machinpries at the smelting-houses as at the stamping-mills of Hongfosses, and the flour and saw-mills. The town of Drammen, distant only 3 miles, offers to the works an easy transport of its produce, and those imports which must be drawn through a seaport.

The time when, and the place where, the public sale is to be held will be advertised by the auctioneers in due time.

The Administration of Eker, Modum, and Sigdahl Möllenhoff, near Drammen, in Norway, the 26th March, 1849.
G. P. RASCH.

For further particulars, apply to Goodhall and Reeves, London,

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SOURTON CONSOLS MINE.
In 5000 shares, not to exceed £1 each (if required).
CONDUCTED ON THE COST-BOOK SYSTEM. 39

This MINE is situate in the parish of SOURTON, between Tavistock and Okehampton, and was, in 1845, taken up by a company, under lease of 21 years, and at a dues of 1-15th who worked it for some time; but, from improper management of their affairs, they became involved in debt, and the sett and materials, &c., were recently sold to clear off the then remaining liabilities.

The lode is a regular one, running a little north of west and south of east, as is usually the case with the copper veins of the neighbourhood, such as in the Great Wh. Friendship Mine, &c., and is has been cut in a pit on the back, and also in a shaft 10 fathoms deep—in each of which is a most kindly gossan, averaging 9 feet wide, and bearing a strong similarity to the gossan of the Devon Great Consols, and spots of copper have been seen in it, but at so shallow a level no discovery of importance can reasonably be expected.

The sett on course of the lode is about a mile in length, and to the west is Wheal Sarah, in the same lode, which produces grey copper ore, mixed with silver. To the east, about a mile, the granite commences; and there are other known lodes within the sett, which is altogether an extensive one, and which can easily be rendered more so on very moderate terms, by the indispensable addition of a sett to the north, in close contiguity with it. A reference, however, to Mr. Jehu Hitchins's subjoined report will give a better idea of the nature and capabilities of the sett, and whose recommendations it is proposed to carry out.

An engine-shaft has been sunk to a depth of 18 fathoms, at a distance north, calculated to cut the lode at 35 fathoms deep—the ground being a congenial blue killas, of an easy nature for working.

There is a sufficiency of water to work during most of the year; but, in case of necessity, an additional quantity can be brought in from the River Okement, on lease, at 1s. 6d. per diem, as long as it might be required; and the leats can be cleared up at a trifling expense.

The projectors of the proposed company having possessed themselves of the sett, together with the major part of the machinery and materials, comprising a new water-wheel of 40 feet diameter, and 2½ feet in breast, an excellent run of surface iron rods, 2 inches diameter, with pulleys and stands, travelling balances and shaft bobs, a whim and poppet heads, triangle, &c., 14 fathoms of 8-inch pumps and 7-inch workings, with windbore and clackdoor pieces, complete—altogether 19 fathoms, shaft, rods, &c.—offer the whole for £625, or 2s. 6d. per share, a sum greatly below their original cost.

The mine is held in much esteem in the neighbourhood, and a portion of the shares have already been applied for, but not of sufficient amount to defray the expenses of working it to the necessary extent; the present mode has, therefore, been adopted to obtain the co-operation of some influential London party.

All persons desirous of joining in this adventure are invited to send their own agents to inspect the mine.

As soon as three-quarters of the shares are allotted, a preliminary meeting will be held, for the purpose of settling the rules and appointing a committee of management, as well as other necessary agents.

A deposit of 5s. per share will be required to cover the cost of the sett, materials, &c., and to provide a fund for commencing the workings; and for the security of the subscribers, the same is to be paid to the credit of the company, into the bank of Messrs. Gill and Rundle, Tavistock, Devon, whose receipt shall entitle the holder to priority of entry in the cost-book. All surplus shall be returned, and no subscriber's liability shall extend beyond the £1 per share.

Every other particular can be obtained, and a list of the adventurers, together with plans of the mine, seen on application to Mr. George Trickett, sharebroker, Post-office Chambers, Plymouth; Mr. Jehu Hitchins, mining agent, Tavistock; Mr. Jehu Ball, Okehampton; and Mr. T. P. Thomas, sharebroker, No. 3, George-yard, Lombard-street, London—to either of whom applications for shares are requested to be made.

Prospectuses may also be had at the office of the *Mining Journal*, 26, Fleet-street.

Plymouth, March 12, 1849.

SOURTON CONSOLS. Tavistock, March 13, 1849.

SIR,—Having at the desire of several of your shareholders carefully inspected the sett and workings of this adventure, with a view to submit my report thereon, I beg to state as follows:—

1. The back of the lode, as seen in the shode shaft sunk thereon, presents the most promising appearance for copper I have for a very long time seen, being in effect a similar large and kindly gossan to the back of the Devon Great Consols lode, as first discovered in Wheal Maria.

2. The lode is a regular one, from 9 feet upwards wide, running about east and west, and underlying north about 3 feet in a fathom, with good walls, analagous to and parallel with the Wheal Friendship Mine lode, and is in a congenial killas stratum, bordering on the granite formation, distant about a mile to the eastward; and copper ore has been me: with in the adit of the adjoining sett of Wh. Sarah, to the west, on the same vein.

3. There has been considerable useful work done, besides commencing an engine-shaft to take the lode at 35 fathoms below the surface—in my opinion an eligible point—18 fms. of which are already sunk. The water-wheel, flat-rods, pumps, and other appliances now in the mine are in very good working order, and of sufficient power to drain the mine to a great depth. Should the preliminary trial I now advise of sinking the shaft to intersect the lode, and driving—say 50 to 80 fathoms each way—east and west thereon, induce a more extended working, this, together with providing the necessary additional materials, as well as to pay the value of the present machinery, can be accomplished for about £3000, and occupy in time about 18 months.

In conclusion, I strenuously submit, that on no account should this kindly undertaking be abandoned until the trial I have advised be made—the more especially as so much has already been done, and which, without a further trial, can only be regarded as money thrown away. I, therefore, hope soon to see a resumption of operations actively carried out, and I have no doubt but that they will be crowned with success.

I remain, Sir, your most obedient servant,

To G. Marshall, Esq., Plymouth. JEHU HITCHINS.

PROCESS OF CARBONIZING TURF WITHOUT CLOSE VESSELS.

BY DOMINIQUE ALBERT, LL.D.

When, in 1835, I built my present works at Cadishead, I was chiefly induced to choose the place on account of the proximity of both turbaries, Chat Moss and Barton Moss, having previously ascertained that I could make with turf as good charcoal as with wood. As the charcoal I wanted was for some chemical purpose other than to be used as fuel, the first condition of the carbonization was, that it should produce a vegetable black, free from the mineral substance mixed with it, as is always the case when turf is carbonized in Ireland, to supply the hearths of some country smithies. I began, then, by submitting the turf to a dry distillation in iron retorts, five feet deep to four feet diameter, covered with strong sheet-iron caps, to which I adapted cast-iron pipes. I soon found, however, that the quantity of auxiliary mineral fuel required to burn the turf, owing to the distance of seven miles from the nearest pits, rendered this method too expensive to be continued.

I expected that the acid would compensate for the price of the coal, but I could never get it above two or three degrees; besides, the pyrolignous alcohol diluted in the acid existed in a very small proportion. The tar, which was comparatively abundant, contained the greater part of the spirit; but the low price of tars in general offered me no encouragement to proceed. I knew, by the discoveries made by my countryman, Mr. Merle, in 1834 and 1835, that certain species of turfs gave a richer and superior gas than either coals or oils, and I am convinced myself that the peats in my neighbourhood were of an excellent quality for such a purpose, but I did not feel inclined to set up any apparatus to save that produce, so I turned all my attention to find a cheaper mode of producing pure charcoal. I had latterly observed the Irish in their process, which consists of setting fire to a few turf cakes placed on the ground, so as to let the air play between. As soon as these cakes are burning, they heap round and above other cakes, which very soon ignite also. They continue to feed thus this heap of fire, till it reaches about five feet in height, and six or seven at its base. They let it burn till the whole appears in a complete glow, when they cover it with large wet sods, either of soil and grass, or heath sods, from the surface of moss land. This careless, but cheap and easy manner, causes the charcoal to be mixed with a quantity of uncarbonized vegetable, marl, sand, stones, and a notable proportion of ashes, all matters which do not affect the iron jobs with which they come in contact.

The Dutch I saw, many years ago, carbonizing peat for domestic purposes in small conical furnaces, as common with them in the country places as the bread ovens are here. They light the turf from below; and, when the combustian is nearly completed, they close the top and bottom. Their method, though superior to the Irish, and well adapted to their object, is neither as complete, nor does it give so pure an article as I wished; besides, I found its application almost impossible on a large scale. Amongst the different plans and instructions I consulted to assist my experiments, I gave the preference to a large round perpendicular furnace, in which, according to Dumas (*Chemistry applied to the Arts*), Mr. La Chabeaussiere distils wood. After having studied what modifications were necessary to render Mr. La Chabeaussiere's furnace useful for peat's carbonization, without saving either gas or liquids, I constructed the following kiln:—On a solid soil, I made an excavation from ten to twelve feet wide at the top, nine feet deep, and nine in diameter at the bottom, which I covered with a dry brick floor, that had a convexity of six inches. I lined this hole round with a dry brick wall, in the way of a common pump pit. At four equal distances at the bottom of the round wall I opened an air-hole of about four inches square, and continued it in the form of a narrow chimney outside the wall, to the height of about six feet, when I prolonged it about six feet more, but in a horizontal direction. For the top of this kiln I had a sheet-iron cover made, a few inches wider than the diameter of the brickwork, of a convexity of two feet, with a round hole or chimney in the centre, one foot high, and nine inches diameter, provided with a cover and handle similar to that of a canister, and at a foot from the extremity of the large cover, are cut out four auxiliary chimneys, at equal distances one from the other, with a four-inch diameter. Four strong iron rings are fixed to the cover to receive the hooks of a chain, which, by means of a double purchase, raises or lowers the cover. When this furnace, says Dumas, is filled with wood, the cover is lowered down, and some firebrands are precipitated through the centre chimney to the bottom of the kiln; the wood being placed so as to leave a sort of funnel open. By means of the four blowing air-holes, the fire is very soon spread in all directions, and its progress is to be regulated by shutting or opening the smoke and air-holes, according to the direction of the wind.

These rules, which no doubt did answer when wood was to be distilled, were inefficient when applied to the carbonization of peat; but by dint of trials and patience, I succeeded beyond my utmost expectations, upon the following plan:—I make two tunnels of inch board, nine feet high and eight inches square, with some hand-holes from distance to distance. These tunnels I place in the kiln along the side, in order that the bottom end may correspond with one of the four air-holes; one of my workmen descends then to the floor of the furnace, and forms an aerated bed with peat, by setting the cakes upright, with their tops inclined one towards another, so as to create a good draught, which must, as much as possible, run in the direction of both air-holes where the tunnels are standing. It is necessary for this operation that the cakes be entire and dry, as pieces would intercept the air, and a wet cake would paralyse the action of the fire. After the setting of this bed, the peat is thrown down upon it, and left in the natural confusion of its fall, only it is required that a man place round the tunnels the turf cakes in regular order, to build like a chimney round these moveable tubes. When the kiln is filled and heaped up about three feet above the level of the hole, the tunnels are drawn out by means of their hand-holes, and leave two square passages from top to bottom. In these temporary chimneys, a few incandescent peat cakes are thrown, and on these some broken pieces of turf, till the passages are filled; but as the air plays more freely through these former chimneys, some barrowfuls of peat crumbs will shut the too wide pores, which places are easily seen by the greater volume of smoke escaping from them. The kiln left open, to facilitate a more general conflagration, is not covered before the heap of turf cakes has sunk to the level of the brickwork. In this state, the cover is let down, and some soil is brought round its border to intercept the escape of smoke. In this state of carbonization, all the air-holes with the large and small chimneys are open. As soon as the fire is perceived through either of the small chimneys corresponding with the passages where the fire has been lighted, the horizontal mouth of the same air-hole is to be shut with a piece of brick and some marl, and the others are to be successively stopped in the same way, the moment the redness of the fire can be distinguished. If there remains any doubt of the perfection of the operation, a pole about fourteen feet long should be thrust into the hole where the carbonization appears incomplete, and by thus guaging to the bottom of the furnace, you will immediately be aware of the state of the charcoal, which you can remedy instantly, by opening the air-hole opposite the place examined.

When the smoke begins to abate, you place the cover on the central chimney, but so as to shut only the half of the aperture, taking care at the same time to direct the open part of the cover towards that part of the kiln which you might consider not so perfect as the remainder. At last, when the eruption of smoke has ceased, you shut all chimneys immediately, and the operation is at an end. It requires generally 24 hours to complete the carbonization of one furnace, and 60 hours for carbonization and cooling of the charcoal. A kiln of these dimensions can receive between three and four one-horse loads of peat, of about 14 cwts. There are three kinds of peat. The white, or top of the moss land, is the lightest, and consequently the worst; it is sold from 4s. to 5s. the load. The brown, which comes from the second stratum, is much better, being more compact, and sells at 5s. 6d. per load. The black, or best quality, sometimes called iron-turf, is very hard and heavy; it gives an intense and sharp heat; produces a thick black smoke, with strong and unpleasant smell; it burns slowly, and is bought at 6s. The incineration of the black turf leaves heavy reddish ashes, whilst those of white turf are of a sulphur yellow, and those of the brown have often a sort of orange tinge. The peat ashes, which owe their alkaline quality chiefly to the presence of lime, are considered a good manure for grass and clover, and used as such in the north of France and in Belgium. March and April are the best months to use them. They are generally sown during damp weather, and will have a good effect used with any plant, at its first appearance above ground. I tried them last year with peas and other vegetables, and perceived in one instance, that the use of them cleared the cabbage plants of the insects that were devouring them. In order to get the kiln to act more regularly, it is well to carbonize each sort of peat separately. I have at present four furnaces or kilns at work; they are constructed between two rails, on which I have built a moveable frame, with a roof covered with a tarpaulling. This skeleton of a house answers two purposes; namely, it enables the men to fill and empty the kilns in all kinds of weather, and affords to the whole line the use of the double purchase to wind up the heavy iron covers. The white turf gives a fourth of its weight of charcoal, the brown a third, and the black one-half. The nature of charcoal from peat is a great deal less pyrophoric than that of wood charcoal; and during the four years that I have had always large quantities in the interior of my works, I have not had a single instance of a spontaneous ignition, whilst I had two accidents of this nature with wood charcoal in the short space of six weeks.—*Mining Almanack.*

MINING AT THE CAPE OF GOOD HOPE.—Dr. Alexander, who has recently returned from a tour in Africa, has forwarded us a specimen of grey sulphate of copper from the Cape of Good Hope Mining Company's establishment at Namaqualand. It is a beautiful specimen of this description of ore, and, from appearances, probably contains 50 per cent of copper. It is, however, much to be regretted that, from all we can learn, the company must prove an entire failure; the scarcity of food, and even water, in the arid desert in which the mines are situate, precludes the possibility of keeping up an establishment to work the mines with that spirit, and to that extent, which can alone render such operations remunerative to the adventurers. We presume there is even no land capable of cultivation within a considerable distance, or two seasons might probably put a very different aspect upon the company's prospects.

Mining Correspondence.

BRITISH MINES.

ASHBURTON UNITED.—The mining agent (April 24) reports—As the communications between the different pitches on the north lode are completed, I expect to place more tributers on it, so as to increase the quantity of our stamping stuff; by next Saturday, I intend to increase the number, in resetting the bargains. The pitches on the north lode, in the 45 fm. level, look well, as usual; and the east and west ends of this lode, in the 55 fm. level, in their extension, leave every prospect of important pitches behind them; also the extension on the same lode, in the 35 fm. level, showing thereby the continuity of this valuable lode. The middle north lode, cut at Parry's 14 fm. level, has improved for tin; also in the 35 fm. level, and the 45 fm. level. The remaining pitches on the south lode and branches are the same as last reported. We are exploring to cut a further north lode by a cross-cut from Hobson's 35 fm. level (about 55 fms. from the surface); we are driving it for 2*l.* 10s. per fm., in very congenial strata, and I do not think it will be long before we cut a still more important north lode.

AYLSBOROUGH.—The mining agent (April 25) reports—Our shaft is now down 20 fms. under the adit, which is 10 fms. deeper than any part of the old workings; the last 10 fms. are sunk on the course of a lode which produces good work for tin nearly the whole length; the men are now engaged in preparing to drive on the course of this lode, from which there is every reason to expect we shall break some excellent work. In driving east in the 10, on the course of the lode, we are breaking some good work, and appear to be getting under the run of tin gone down in the bottom of the old workings; however, the main bunch, from which the old company made such large returns, is about 10 fms. farther east than our present end. The stopes to the west of No. 4 backs are producing some excellent stamps work. In driving west, the lode is somewhat disordered by the slide, still it produces a little tin, but not rich. We do not expect much improvement until we get off some fms. from the slide.

BARRISTOWN.—The mining agent (April 20) reports—The lode in the winze sinking in the bottom of the 16 fm. level is still small, but looking well for ore; the ground is not so hard for sinking, which is also a good indication. The lode in the back of the 12 fm. level is producing from 10 to 12 cwts. of lead per fm. for a few fathoms west of the slide. The stopes in the bottom of the adit level are rather improved, producing at present rather over 6 cwts. of lead per fm. In the back of the adit level, west of the slide, the orey part of the lode is lengthening west; it is producing about 1 ton of lead per fm. at present; the branches in the adit end, driving east of the slide, are regular, but small and poor, and ground presenting but little change since we left the slide.

BEDFORD UNITED.—The mining agent (April 25) reports—At Wheal Marquis, the ground in the engine-shaft is favourable for sinking. There is no alteration in the 103 fm. level. We continue to drive by the side of the lode in the 9 fm. level east. Burley's winze, in this level, is now about 5 fms. under the level—lode from 3 to 4 ft. wide, still worth 80*l.* per fm. In the western winze, in this level, sinking on the south lode, the lode is 2 ft. wide, good work. There has been no lode taken down in the 70 fm. level east.

BWLCH CONSOLS.—The mining agent (April 23) reports—I was underground yesterday, at Bwlch. The bottom level, the 31, east of the engine-shaft, is in a very good course of ore, yielding 3 to 4 tons per fathom, for 8 feet wide; the end is now 7 fms. east of the engine-shaft. The 30 fm. level west, now about 20 fms. west of the engine-shaft, is also in a good piece of ore ground, now yielding about 1 ton per fm. The stopes throughout the mine are just as productive as usual, more particularly so in the back of the 20 east and the back of the 5 fm. level, under the adit. The western stopes, over the 25 fm. level, 15 to 20 fathoms west of the engine-shaft, are also yielding a fair quantity of ore. In the ore ground discovered east of the engine-shaft (about 40 fms.), by the cross-cut south, we are commencing to sink to give air to the 25 fm. level, and to lay open the ground for stoping. Doran's shaft is now down to the 32 fm. level, which we are driving westward to open ore stopes between this and the engine-shaft. We sample to day 65 tons of ore; but I expect to increase our samplings, as we have the new crusher now in course of erection. The mason-work was not sufficiently dry before.

CALLINGTON.—The mining agent (April 23) reports—In the north engine-shaft the ground continues much as usual—a stiff killas. In the 112 fathom level north the ground is soft for driving, the lode producing good work; the back will work at a low figure; in the south end the ground is hard, and the lode producing silver-lead ores; the rise in the back of this level is laying open tribute ground. In the 100 fathom level north the lead lode has fallen in with a cross-course; they are going on together, and producing good stones of silver-lead ores; the latter has not been cut through; in the 100 fm. level south the lode is producing silver-lead ores; Kelly Bray lode, in this level west, is producing stones of copper ore. In the 90 fm. level east the lode is poor. In the 70 fm. level east the lode is 9 ft. wide, producing from 3 tons to 4 tons of copper ore; the lode is producing peach and fluor-spar, and looking more kindly than it has for a considerable time past: this point is now about 6 fms. to the west of Kelly Bray shaft. In the 50 fm. level east the lode is smaller, now about 15 in. wide, producing stones of copper ore. At Kelly Bray no change worthy of notice has taken place. At the south mine, the lode in the 125 fm. level north is producing silver-lead ores; in the south end we are opening tribute ground. In the 112 north the lode has not been taken down; in the opening tribute ground. In the 100 fm. level north the lode is small, south end we are opening tribute ground. In the 90 fm. level south the lode is unproductive, producing work of a moderate quality. In the 70 fm. level south we are opening ground that will work at a moderate tribute. In the 40 south the ground is favourable, the lode producing silver-lead ores.

CWM ERFIN.—The mining agent (April 21) reports—Since last writing we have done nothing underground, but have been dressing the stuff drawn on the surface; we have our round buddle now at work, which will help us considerably in our slime dressing. We have had a change in the weather, and our water is in fork. On Monday we shall measure our bargains for last month, and set, and as the dry months are now past, we hope our returns will be larger and more regular.

DEVON AND COURTENAY.—The mining agent (April 24) reports—The lode in the end driving west, in the 40 fm. level, is about 2 ft. wide, interspersed with small branches of spar and spots of ore. In the end driving east, in the 50 fm. level, on the south lode, we have intersected the cross-course that was discovered in the level above; on this cross-course we are now driving north, to open the lode on the eastern side of it; at that place I expect an improvement, as the lode was looking much better on the western side previous to cutting the cross-course; the lode in the rise in the back of this level is 2 ft. wide, producing about 1½ ton of ore per fm.

EAST BIRCH TOR.—The mining agent (April 24) reports—That the lode in the engine-shaft, the lode to the south of the elvan course, and the two ends to the north of the elvan course, driving east and west, are very much the same as last reported; the back that we are taking away, west of the footway shaft, is very much improved during the last week; we have a good bunch of tin in it. Our dresser is come, and we are dressing up our ores as fast as possible. I hope, in my next report, to let you know the quantity we have cleaned. As to our water-power, there is not one doubt about it; I have levelled it this week. You will see by the plan that I have sent to Mr. Taperell our power.

EAST CROWNDALE.—The mining agent (April 21) reports—The ground in Diamond's engine-shaft is composed of a close blue killas, and is rather more difficult to sink in than when last reported upon. In the past week we have cut a branch in the shaft leading into the lode, about 4 in. wide, which contains good work for tin. The adit level, driving west on the course of Thomas's lode, is still poor, although there appears to be a little alteration for the better; the killas of which the lode has been composed is wearing out, and giving place to peach, which is most congenial for tin. Tippett's stope, in the back of this level, is composed of peach, prian, spar, mundic, killas, and tin; the part of the lode we are carrying is 8 ft. wide, and produces about 40*l.* worth of tin per fm. Paull's stope, to the east, is composed of peach, mundic, prian, and tin, and produces upwards of 40*l.* worth of tin per fm.; the ground in this place is hard, and difficult to break, consequently the quantity of work is small, in comparison to the western stopes. The 17 fm. level, east of Diamond's shaft, is poor and unproductive, and the ground very hard; the lode is composed principally of peach, mundic, and elvan, and does not at present produce any saving work. The parcel of tin, computed at 10 tons, sampled on the 17th inst., fetched 43*l.* per ton, with an allowance of 2*l.* per ton for carriage. We hope to sample another 10 tons by the 30th inst.

ESGAIR LLE.—The mining agent (April 23) reports—The following is an account of our setting on Saturday last:—4 men stoping in bottom of the deep adit, on the course of the lode, east of the engine-shaft, 6 fms. stent, for the month at 40s. per fm.—stoped last month 7 fms. 4 ft. 2 in.; the lode is improved since my last report, and will yield on an average 6 cwts. of ore per fm., and is looking more kindly in the bottom of the stopes than at any time before. To sink a winze in bottom of the shallow adit by 6 men, 3 fms., for the month at 6*l.* per fm.—sunk last month 1 fm. 1 ft. 10 in.; the lode is orey for about 3 ft. wide, and is looking very kindly indeed, and will yield on an average from 10 to 12 cwts. of ore per fm.; and, from the present indications, I have much reason to believe this lode will make a productive one—in fact, it is with much pleasure I have now to inform you that this lode, which is now so likely to make Esgair Lle a productive and standing mine, has never yet been cut or seen below the bottom of the present winze, which is now only 2 fms. 3 ft. 4 in under the shallow adit; and, according to my dialling, we should only have 15 or 16 fms. to drive to cut the lode at the deep adit level, which would give us about 26 fms. of backs to the shallow adit, on the course of the lode. This lode, which now adds so much to the former prospects, either baffled or escaped the notice of my predecessors.

EXMOOR WHEAL ELIZA.—The mining agents (April 26) report—Since our last we have sunk about 3 ft. in our shaft, which nearly completed it to the 24 fm. level; but, from existing circumstances, it was thought proper to commence driving north and south at once. This being done, in driving north about 3 ft., we cut the caunter lode, which is a mass of gossan, impregnated with particles of copper and mundic; its size we cannot say as yet—having cut into it only 2 ft. There is no symptom of any north wall; but it is highly probable that it is as large, or even larger, than in the level above. As the ground is hard, we deem it proper to drive south-west on this lode, to intersect our south lode, rather than drive at right angles, as in doing so we shall be both proving the caunter lode, and likewise cut the south lode in less time than would take in driving through the country. There is a vast influx of water issuing from this lode, which has nearly overpowered the engine. This, however, may be partially attributed to the thawing of the snow; we hope, after a day or two, it will be drained, when we shall be able to report more favourably. It may be well to remark, that we did not anticipate much copper in this lode, at least in this level; but being mixed with ore, it presents strong indications in favour of the other lodes, which, agreeably to analogy, we are warranted to expect productive in the points of intersection. We most intensely look for, and expect the arrival of, that happy period when the adventurers shall be remunerated for their patience and outlay.

FOEL RHUDD (SILVER-LEAD AND COPPER MINE, MERIONETHSHIRE).—The mining agent (April 25) reports—We have cleared the deep adit level since I wrote you last, so as to see the present adit end, and the adit level is driven in under the Foel Rhudd Mountain, at a dead level from the River Dovey, upwards of 240 fms.; the lode in the present adit end is 3 ft. wide, composed of barytes, carbonate of lime, mundic, and tough flookan, impregnated with silver-lead ore—a very promising lode indeed; you will bear in mind, this level is not secured, but as soon as the timber is brought on the mine, there shall be no time lost in making it secure, so as to drive and intersect the east and west copper lode, mentioned in my last report. I have also to inform you that after the above works had been done, I put the men to sink on the course of the lode, in the bottom of the adit level, and they have sunk about 3 feet deep and 9 feet long; the lode in the said sink is exactly the same composition as above stated, which is worthy the immediate and vigorous operations of sinking a new engine-shaft, which must be done to enable us to make good dividends; and, in order to put the mine in a dividend-paying position, there must be an engine erected (water engine), leverage 18 feet, and 36 feet high, and 4 feet over the breast, with cranks, rods, pulleys, bobs, pumps, &c., to make the engine complete, excavating the wheel-pit, and building the wall for the above-mentioned wheel, cutting leats to bring the water over the engine-wheel, sinking the engine-shaft below the adit level 20 fms., with the inclusion of the necessary buildings, such as a smiths and carpenters' shops, office, and materials house. The outlay of the labour and materials to complete the above works I have carefully estimated, and I find they will cost about 1400*l.*, and, by so doing, I do not hesitate to say, as I have before stated, you will have a good dividend-paying mine.

HAWKMOOR.—The mining agent (April 25) reports—Since my report of the 14th March, I beg to inform you the 20 fm. level, east of the old men's shaft, has been extended about 3 fms. 3 ft. through a good course of ore, averaging 2½ ft. wide, and yielding 5 tons per fm.; this level west has been driven 3 fms. 2 ft., the lode having yielded good saving work. I am happy to say the lode in the present end is very much improved, being 8½ ft. wide, and will turn out about 4 tons of ore per fm. The stopes are suspended for the present, to enable the men to rise against the shaft; the lode in the breast, however, remains equally good as last reported—viz., 2 ft. wide, and worth about 5 tons of ore per fm. We sampled and weighed our produce for March, on Friday, 37 tons 17 cwts. 1 qr. of superior quality ore.

HEIGNSTON DOWN CONSOLS.—The mining agent (April 21) reports—I beg leave to inform you that the lode in the 35 fm. level, east of Bailey's engine-shaft, is 5 ft. wide, of promising character, to the value of 7*l.* per fm. The lode in the 30 fm. level, west of engine-shaft, is much as last reported, and worth about 15*l.* per fm. The tributers are likely to earn fair wages in their respective tributes. The western shaft is sunk, since last report, 3 ft., the lode in which is large, but not having seen the south wall cannot report its size fully; it is, however, 4 ft. wide, of very promising character, to the value of at least 18*l.* per fm. for tin ore.

HOLMBUSH.—The mining agent (April 24) reports—We have intersected three or four branches of copper ore, spar, and mundic in the 132 fm. level, west of the diagonal shaft, dipping north, but we still hope the main part of the lode is before us; the ground in this level north is favourable. In the 120 fm. level south, east of Hitchens's shaft, we have intersected several small branches of rich copper ore, all of which are underlying south towards the main part of the lode, which, by dialling, is about 6 feet further in that direction; the lode in the bottom of this level, west of the cross-course, is somewhat improved in size, and has a kindlier appearance of again being found productive, having been rendered small and impoverished by a slide; in the same level south, the lode is from 2 to 3 ft. wide, producing good work for lead. The lode in the 110 fm. level south is 3 ft. wide, and worth 7*l.* per fm. We have extended the 100 about 6 fms. north, to intersect the caunter part of the Flap-jack lode, where the ground is favourable for exploring. The tribute pitches, on the whole, are yielding a fair quantity of mineral, both of copper and lead; 30 tons of the latter we hope to sample at the usual time.

KINGSETT AND BEDFORD.—The mining agent (April 24) reports—I beg to inform you that our north lead lode is looking remarkably well; we have broken large stones of lead in it, the largest we have seen as yet; also in the Bedford rise we are breaking good lead work. The copper lode is 4 ft. big, and carries good north and south walls, full of mundic, with spots of copper ore, peach, and good spar, resembling Old Wheal Friendship. The water which came from the greens is now principally out of the end we are now driving, showing there must be a course of copper somewhere a-head of us. We have discovered another lead lode in shoding, about 50 fms. east of our copper lode, the gossan in which is the best we have ever seen; several of our mine agents have seen it, and they pronounce it to be most splendid; this same lode runs through the Old Wheal Friendship Mine, and the copper lodes, when they come in contact with this lode, have made thousands of tons of copper. Our end, at present, promises we shall have copper a long while before we arrive at this lode; it looks well to have such ahead of us. We have cut this same lode in five pits, but I have filled up four of them, because they would be an injury to the farmer.——*April* 26.—In driving north on the eastern lode there is an improvement; the last 4 ft. they took down they broke stones of solid lead from 10 to 13 lbs. weight; the lode is now nearly 3 ft. wide—good work; but we shall take down no more lode until we have reased about 6 ft. We have taken down the lode in the rise in the Bedford right, and it looks well; there are about 4 in. of nearly solid lead running nearly in the centre of the lode, as well as a small leader of lead on the foot-wall. The copper lode driving east, near the greens, is 4 ft. wide, carrying two regular walls, and appears to be getting into a more regular clay-slate as it gets off from the slide; it is composed of large rocks of mundic, spotted with copper, and its bearing is about 15° north of east. I consider it to be a very promising lode. We have cut another lead lode about 30 fms. to the east of the present end now driving on the copper lode, but cannot exactly state its bearing, as we have only just opened on it; it carries a most splendid gossan of a soft nature, with a great deal of carbonate of lead.

KIRKCUDBRIGHTSHIRE.—The mining agent (April 21) reports—The lode in the engine-shaft is still about 5 ft. wide, with a fine spar and spots of ore; it is down now about 9 fms. from the 50 fm. level. The lode in the 50 end east is 4 feet wide, and very kindly, with a few spots of ore; it is leaving the black ground; the lode in the 50 west is about 2½ ft. wide—a fine lode, yielding three-quarters of a ton to the fm.; this is the commencement of the ore ground in the level above. The lode in the 40 end west is 4 ft. wide, of a very kindly nature, and good stones of ore on the south side. We have holed the rise to the bottom of Crouch's shaft this week.

LEWIS.—The mining agent (April 14) reports—The lode in the 70 east is 2 ft. wide, at present disordered by a cross flookan; the 70 east, on south branch, is worth 4*l.* 10*s.* per fm.; in the 70 west, on south branch, the lode is very much improved since my last, now producing some very rich quality tinstuff. The 60 east from sump shaft, on south branch, is producing good quality work; the 60 east from sump shaft, on Cock's branch, is worth 15*l.* per fm.; the 60 west is suspended until Oak shaft is holed to the same. The lode in the 50 east from sump shaft, on Cock's branch, is 2 ft. wide, worth 12*l.* per fm. The lode in the winze, sinking below the 50, on Cock's branch, is 2 ft. wide, worth 10*l.* per fm. In the 50, east of the cross-cut from Copper-ore shaft, on Cock's branch, the lode is 1 ft. wide, yielding some good quality tinstuff; the lode in the 50 east, on south branch, is 1 ft. wide, opening good tribute ground. The lode in the 30 west, on south branch, is 18 in. wide, worth 7*l.* per fm. The south lode, in the 10 fm. level east, from Copper-ore shaft, is 1 ft. wide, worth 4*l.* per fm.

LLWYNMALEES.—The mining agent (April 17) reports—Since my last we met with a piece of ground in driving the 14 fm. level west, which has disordered and heaved the lode more to the south; but I have no doubt that we shall shortly enter again on the lode in a very improved state, for there is much water coming out of the end, which has, no doubt, drained the western winze, as this winze, which is near the surface, has become quite dry, and in which we can see a very nice branch of ore. We have a good lode in the London shaft, which is sinking without hindrance of any sort. In Oliver's winze we have resumed the sinking, as we have not much water to contend against now that the pumps are at work in the London shaft; the lode is much better in this winze than in the shaft. The severe cold weather has thrown us back in our dressing.

LOSTWITHIEL CONSOLS.—The mining agent (April 23) reports—Capt. Coad is of opinion that the lode is 4 ft. ahead still, though we cannot say; the ground has been very hard for six weeks past, and is now set at 8*l.* 10*s.* per fm.; the heads are faced with ore occasionally, and the water plentiful. Capt. Coad thinks the ground will ease about the lode, especially after we have turned on it a little towards the southern hill, under which is our adit level. The distance of the present end from the shaft is 30 fms. 2 ft., and as the ground is now, they can only drive about 1 fm. per week. I hope they will do that. There is no reason, from what is in sight, to doubt the character of the caunter lode.

MENDIP HILLS.—The mining agent (April 23) reports—In Ubley slag ground we continue to press forward with our different operations as fast as the unfavourable state of the weather will admit; the carpenters are at present engaged about the dressing department, such as fixing the necessary strakes, machines, &c., required for washing and cleaning the slags; the masons have also commenced building the carpenters and smiths' shops—this work I have let at 1*s.* 3*d.* per perch. In Charter-house slag ground no material alteration has taken place in the beds of stuff, being from 16 to 17 ft. thick, good work for slags.

STRAY PARK.—The mining agent (April 23) reports—In the 80 fm. level, driving west, on Wheal Francis, the lode is small and unproductive. In the 90 fm. level, driving west, on Wheal Francis, the lode is 20 in. wide, yielding stones of ore. In the 100 fm. level, driving west on Wheal Francis, the lode is 2 ft. wide, yielding 4 tons of ore per fm. In the winze, sinking below the 100 fm. level, the lode is 2 ft. wide, yielding 1 ton of ore per fm. In the 110 fm. level, driving west, the lode is 20 in. wide, yielding 1½ tons of ore per fm. In the 120 fm. level, driving west, the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the 130 fm. level, driving west, the lode is 1 ft. wide, yielding good stones of ore. In the winze, sinking below the 130 fm. level, the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the 180 fm. level, driving west, the lode is 3 ft. wide, yielding 3 tons of ore per fm.; in the 180 fm. level, driving east, the lode is 18 in. wide, yielding 1 ton of ore per fm. In the rise above the back of the 180 fm. level the lode is 3 ft. wide, yielding 2½ tons of ore per fm. In the 56 fm. level, driving north, the ground is favourable, driving for 20s. per fm. The engine-shaft is sunk 9 ft. below the 180 fm. level. The tribute ground is looking very encouraging.

SOUTH WHEAL TRELAWNY.—The mining agent (April 23) reports—The engine-shaft is in course of sinking with eight men; ground more favourable than when last mentioned, also a dark blue strata; water a little quicker. The engine continues to work well; things are in a regular course of working.

TALIESIN.—The mining agent (April 23) reports—The lode in the engine-shaft is still large, and yielding about 15 cwts. of ore per fm. The men have not worked in the winze since last week's report, as they are engaged at the surface raising stones for the wheal pit. The lode in the adit level, east from the shaft, is 8 ft. wide, producing stones of ore. The stope in the back, over the deep adit level, east from the shaft, is rather improved within the last week, now producing a ton of ore per fm. The stope, back and bottom of the shallow adit level, east from the old men's cross-cut, is looking better at present than it has since we commenced working in that part of the mine; the lode is 5 ft. wide, and yielding a ton of ore per fathom.

TAMAR SILVER-LEAD.—The mining agent (April 23) reports—The ground in the engine-shaft is rather hard for sinking. In the 190 end no lode has been taken down since last report. In the 175 end the lode is 18 in. wide, composed of capel and ore. In the 160 end the lode is 2 ft. wide, composed of mundic and ore—rich work. In the 145 end the lode is 2½ ft. wide, composed of fluor-spar and ore of rich quality. The 135 end is suspended for the present, by means of the tributers rising so much work in the back of this level; in the winze sinking in the bottom of this level the lode is 3 ft. wide, composed of capel, can, and ore of coarse quality. At North Tamar, the lode in the 80 fm. level is small and poor. In the 70 fm. level the lode is 18 in. wide, producing good stones of ore. In the tribute department, in both of these mines, the pitches are turning out well, and, on an average, the men are making fair wages. We sold, on the 14th inst., to the Tamar Smelting Company, 105 tons 20 cwts. of ore, at 21*l.* 5*s.* 6*d.* per ton, leaving a profit for March month of 676*l.* 17*s.* 11*d.*

TINCROFT.—The mining agent (April 23) reports—At Palmer's shaft, on East Pool lode, the 90 fm. level west is 1½ ft. wide, with stones of ore occasionally. In the 80 fm. level west the lode is worth 7*l.* per fm. for copper. In the 24 fm. level, driving west towards Stainsby's shaft, the lode is worth 35*l.* per fm. for copper. At North Tincroft, the lode in the 100 fm. level east is worth 11*l.* per fm. for copper; in the 100 fm. level west the lode is 2 ft. wide, worth 10*l.* per fathom for copper. The 90 fm. level east is worth 7*l.* per fathom for copper; in the 90 fm. level west the lode is worth 10*l.* per fm. for tin; in the winze sinking below this level the lode is worth 6*l.* per fm. for tin and copper. On Highburrow lode, in the 152 fm. level, east of engine-shaft, the lode is worth 7*l.* per fm. for tin. In the 142 fm. level, east of Martin's east shaft, the lode is worth 10*l.* per fm. for tin; the stopes in the back of this level, east and west of the shaft, are worth 15*l.* per fm. for tin. The 132 fm. level, east of Martin's east shaft, is worth 18*l.* per fm. for tin; in the west end, same level, the lode is worth 12*l.* per fm. for tin; the stopes in the back of this level, east and west of the shaft, are worth 20*l.* per fm. for tin. The winze sinking below the 120 fm. level, east of Martin's east shaft, is worth 16*l.* per fm. for tin. On Chapple's lode, in the 100 fm. level, west of downright shaft, the lode is worth 7*l.* per fm. for copper. In the 90 fm. level west the lode is worth 18*l.* per fm. and copper; in the winze sinking below this level the lode is worth 14*l.* per fm. for tin and copper. In the 80 fm. level west the lode is worth 6*l.* per fm. for tin and copper. At Blight's shaft, sinking below the 90 fm. level, the lode is 2½ ft. wide, with stones of copper ore. At Chapple's shaft, sinking below the 72 fm. level, the lode is worth 7*l.* per fathom for tin and copper.

TRELEIGH CONSOLS.—The mining agent (April 21) reports—Garden's shaft, below the 113 fm. level, is sinking in the county, south of the lode; in the 113 fm. level, west of ditto, the lode is 4 ft. wide, with stones of ore. In the 100, west of ditto, the lode is 2 ft. wide, with stones of ore and mundic. In the 90, west of ditto, the lode is 15 in. wide, looking very kindly, and will produce 1 ton of ore per fm. In the 80, west of ditto, the lode is 15 in. wide, with stones of ore, mundic, and spar. In the 60, west of ditto, the lode is 3 ft. wide, with stones of ore and mundic, looking kindly. Wheal Parent shaft, below the 20 fm. level, is sinking in the country, north of the lode; in the 20, east of ditto, the lode is 2 ft. wide, with stones of ore, mundic, and jack, and is looking very kindly; in the 20, west of ditto, the lode is 1 ft. wide, not much ore; in the adit east, on the middle lode, the lode is 20 in. wide, looking very promising, and producing 1½ tons of ore per fm. The tribute department is looking much the same as it has been throughout the past month.

WEST WHEAL JEWEL.—The mining agent (April 23) reports.—In the winze, in the bottom of the 57 fm. level, west of Williams's cross-course, on Wheal Jewel lode, lode worth 3*l.* per fm. In the 47 fm. level, west of Williams's cross-course, on same lode, lode worth 9*l.* per fm. when last taken down. In the deep adit, west of Williams's cross-course, on the same lode, lode not taken down in the past week. The stopes in the back of the 15 fm. level, west of Pryor's winze, on Tolcarne tin lode, lode worth 15*l.* per fm.; the stopes east of this winze, in the back of this level, worth 12*l.* per fm. The stopes in the bottom of the 12 fm. level, east of Tregoning's shaft, on the same lode, lode worth 15*l.* per fm.; the stopes in the bottom of this level, east of Tregoning's winze, on the same lode, lode worth 10*l.* per fm.

WHEAL TRELAWNY.—The mining agent (April 24) report—The ground in Phillipa's shaft, sinking under the 72 fm. level, is still favourable. The lode in the 72, north of this shaft, is 3 ft. wide, composed of can, spar, and lead, producing one-third of a ton of ore per fm.; in this level south, the lode is 2½ ft. wide, producing 6 cwts. of ore per fm.; the lode in the rise, in the back of this level, is very similar to my last report. The lode in the 62 fm. level north is 4 ft. wide, composed of spar, can, and lead, producing 1 ton of ore per fm.; the south end, in this level, is suspended, being near Wheal Mary Ann boundary; the stopes in the back of this level are producing a fair quantity of ore. The ground in Trelawny's shaft is still favourable for sinking. The lode in the 52, north of this shaft, is 3 ft. wide, and yielding 8 cwts. of ore per fm.; the stopes in the back of this level, and in the 42, are producing a fair quantity of ore. At the north mine, the lode in Smith's shaft is 4 ft. wide, composed of hornspar, can, mundic, and lead, worth 6*l.* per fm.—price for sinking 3*l.* 10*s.* per fm. The lode in the 30 end, north of this shaft, is small, producing stones of lead. The lode in the winze near Trehane boundary is 3 ft. wide, composed of spar, compact can, and lead, worth 7*l.* per fm. The tribute pitches are yielding a fair quantity of ore. The parcel of ore sampled on the 14th inst., computed 105 tons, was sold yesterday to T. Somers, Esq., at 17*l.* 18*s.* 6*d.* per ton.

WHEAL VINCENT.—The mining agent (April 18) reports—Our work here is getting on satisfactorily. We are now engaged in sinking and securing the shaft to take the lode that we have discovered in the streamers deep cutting. Our other work is getting on well, such as fixing the rods, pivots, &c. We are stamping some good work from the north lode, and hope next week to break tin from other parts.——*April* 26.—The carpenters have nearly completed the work from the shaft to the wheel-pit,; the smiths are night and day engaged in getting the rods complete, and the carpenters are getting on as fast as possible with the wheel. We are breaking some moderate work for tin from the north lode, as well as in the level driving east near the turnpike road, and the stamps are continually at work. We have also commenced stoping on the south lode; the quality of the lode I shall be better able to explain in my next. The shaftmen will commence this day in getting their work ready for sinking.

FOREIGN MINES.

BOLANOS MINES.—The following report was received April 23:—

El Bote Mine, *March* 5.—In handing you the mining report for last month, I beg to inform you that about 48 varas of mara rods have been placed in San Genaro shaft, and a few sets of stays for the same have been fixed, and that we are now only waiting for the capstan and rope to begin to put down the pitwork. The capstan, I think, will be finished by the end of the present week, and the rope, which is being made at the Frestnillo Mines, is promised to be delivered here on the 17th inst., when we shall at once proceed to put down the work. In Taylor's cross-cut, but 3½ varas have been driven since last reported, we having struck, on the 7th Feb., a small vein of quartz, which let out such a quantity of water that we were almost immediately driven out of the cross-cut; and I am persuaded that the above vein of quartz has some connection with the main lode, as the planes, Nos. 2 and 3 east, were in a very few hours left entirely dry, the water at the same time rising in San Genaro shaft, in four days (although with two malacates in full work in the drainage), 35 varas above the head of the cross-cut, which brings it within 8 varas of the level of Compania cross-cut, and at which point, with a trifling variation in the rise or fall of the water, we have been able to maintain it with two malacates at full work. In Compania cross-cut, we reached to the bottom wall of the vein, on the 11th Feb., without making any discovery, and it was in consequence stopped. On the 12th Feb. we commenced a level west from the Pozo de Guia, which is at present partially in fruits, a portion of the vein, nearly a vara in width, being in azogues of low ley. In the level east of Compania cross-cut 7½ varas have been driven during the month in complete borra; but, on the 3d inst., the communication with plan No. 1 east was made, and we are now getting into the same channel of ground in the level we have in the plan, which are azogues of low ley. In plan No. 2 east the vein is at present disordered and poor. In No. 3 we occasionally met with rich stones of metal, covered with native silver; but the cinta is not regular, and the general assay of the azogues comes out rather lower than when last reported. In plan No. 5 the vein is narrow, but the ore is of good quality; consequently, our extraction is small from this point. In the Cielo la Guadalupe east, the vein has much improved, and is at present one of the best labores in the mine. The winze in plan No. 2 west having reached to the depth of Compania cross-cut, it was discontinued, and a level opened out to the west of the winze; but, after driving 2½ varas, it became very hard and poor, and it was, in consequence, stopped. We have since commenced driving to the east of the winze, where the vein is about ½ vara wide, in ore of good ley. The sinking the footway shaft in San Jorge, and the driving the adit east in the mine of Valenciana, has been carried on by labourers.

Extract of a Letter from Mr. Birkbeck, dated March 5.

I have the honour to acknowledge the receipt of your favour of the 27th December, and beg to refer you to my respects of the 5th of February.

Celestina has again improved a little. The south end has better pintas, and more abundant; and possibly, as we approach the junction of the two veins, we may meet another bunch of good ore.

La Granja Hacienda is now employed in reducing the stock of ore we had on hand; after finishing which the mules will be again sent to pasture.

Bote Negotiation.—On the 24th of February Mr. Placci delivered to me the direction of the Bote negotiation, but as he will remain till nearly the end of March, I have requested him to continue superintending it until the time of his departure. There has been some slight improvement in the quality of the ores raised during the month, though some of the bottoms were looking rather worse again on Saturday to the east of Compania. In the west of Compania cross-cut the level is yielding ores of a quality superior to that of the bottoms a few varas higher. In the back of Guadalupe we have also a large cielo that has been producing very good ore. Still Mr. Placci is inclined to think the falling off in one or two of the bottoms to the east so discouraging in the present state of our finances, that he has proposed, should there be no improvement in the present week, to stop the drainage in San Fernando, and allow the water to rise to within a few varas of the level of Constancia and Victoria, and then to maintain it there until the engine can go to work, which will be in about two months. I have sustained a different opinion, although fully alive to the urgent necessity for retrenchment, because I think that the detriment which the mine would suffer would not be compensated for by the saving of the few week's drainage, while the water should rise to the proposed level; and because this additional weight of water would materially increase our difficulties in putting down the lower lifts in San Genaro, and might occasion considerable delay in this important operation. I would, therefore, undergo some sacrifice in preference to adopting this proposal, and will, in the meantime, wrestle with the difficulties before me as best I may, economising wherever any saving can be effected, without risking serious injury to the negotiation. The work of erecting the engine is steadily advancing; the second boiler is now nearly ready to put in its place, and we only wait the arrival of the capstan rope to commence putting down the pumps. The excavation for the tank is also begun, and the other buildings are fast approaching completion. Whilst writing the above I have received a beautiful specimen of ore from the Plan No. 3 east.

Extract of a Letter from Mr. Placci, dated 5th March.

The favourable appearance of the planes to the east, mentioned in my last, I am sorry to say, has not continued. A torta of the ores we were extracting when I addressed you, assayed 5·80 mcs. per monton; but the zoyate again making its appearance in Nos. 2 and 3, disordered the lode, and the ores fell off again. In No. 2, the part of the vein in ores is hardly a vara wide, and does not assay more than 3 mcs. per monton. In No. 3 the vein is more than 3 varas wide; but the ores in general do not assay more than 4 mcs. But still there is a boleo of bunches of most beautiful ores to be met with, full of native silver; and from this point, the day before yesterday, some very rich specimens came—one of which Mr. Birkbeck has, and which he no doubt will mention to you. I have been making inquiries amongst the old miners that worked in Quebradilla, and other persons connected with that mine, and they all agree that in that mine these layers of zoyate were met with; and that, generally speaking, the vein improved after having passed through them—so much so that, when these layers were found, it was considered a good sign; and this was seen especially in the mine to the east—the veins in which are said to be identical with those of El Bote in the last bonanza that that mine gave. In No. 5 the vein still continues narrow, but the ores are very good. The vein has much improved in the Cielo to the east. The sinking of the winze in plan No. 2 west was stopped, having reached the level of Compania; at the very bottom of the winze there remains a cinta, of a quarter of a vara wide, of ores full of native silver; the rest of the vein is very poor; and, in the last pueblies, indications of zoyate began to make their appearance also in this point. From this winze, for two weeks, an end was opened to the west; but the vein being nearly in borra, and hard, it was stopped, and an end was accordingly begun to the east, in which, at present, a cinta, of about half a vara, is giving good ores; but in small quantities.

UNITED MEXICAN MINES.—*Guanaxuato, March* 8.

Mine of Rayas.—The improved prospects alluded to in my last letter, as applicable to the most advanced points to the south-east, then named, were not of long duration, as will be seen on comparing the present report by Mr. Parkman with that of the preceding month, the produce from those points having fallen off both in quantity and quality as suddenly as it had shown improvement in January—indeed, so much so, that independently of a great decrease of the better class of ore by higher dressing, the ordinary kind previously available has now been entirely set apart, as inadequate to cover its reduction expenses, whilst, on the other hand, its charge of extraction from the mine remains the same, as to leave it would necessarily obstruct and fill up the workings. The end Jesus, and pit of Santo Toribio, the most advanced points on the San Miguel position of the mine, the former in horizontal direction to the south-east, and the latter in respect to depth, have greatly disappointed me both as to their present as well as past condition and appearances, and lead me to consider, that if we are not gradually getting out of the former richness of the vein in this quarter, we are, at all events, receding from its centre in the ratio of acquiring additional depth in the pit of Santo Toribio. To test this problem, I have recently undertaken two points in middle ground on tutwork, stimulating the workmen by additional wages to rapid and effective conclusion, which, and the present impoverished state of the mine generally, has further suggested the suspension of the end of Santa Cecilia for the present—a work which has been perseveringly carried on without any immediate benefit for the last 5 years, at a cost bordering on $40,000.

Further retrenchment of expense, commensurate with actual returns, has been made, in other respects, by the discharge of several *employés*, limiting the draining of the mine to present purposes, irrespective of the wide future, and confining the harness to productive and unspeculative labour. To add to the discomfort in our own workings, those of the buscones have also shown a very material depreciation, as the low amount of sales during the last month clearly indicates, and the worst part of this drawback is the total absence of any prospect of immediate amendment, most of the points so worked being quite exhausted. All these matters have combined to make more desirable the acquisition by the company of the adjoining mines of Romontorio and La Cruz, noticed in my last letter to the court; and a negotiation to that end is now in hand for the former, and overtures made for the latter, in respect of which I trust to be shortly in a position to report favourably and definitely, no material progress having been made therein since my previous notice of the subject.

The following data indicates the comparative result of general operations in the Mine of Rayas, during the periods of the last five weeks, each respectively from the 31 Dec. to 27th Jan., and from the 3d Feb. to the 3d inst.—viz.:—

Five weeks ending—	Picked Ores.	Half Sales.	Outlay.
Jan. 27	Cgs. 4660	$7479 2 0 ...	$39,610 2 4
March 3	3401	4901 1 0	31,315 0 0
Cargas	1259	$2569 1 0	$1704 5 4
	Decrease.	Decrease.	Increase.

Remittances.—The next Tampico conducta will leave hence in May; but, at this distant period, I am quite unable to name any amount as remittance by it to the directors.

J. N. Shoolbred.

Report on the State of the Workings of the Mines of Rayas and Aldana.

Rayas, March 6.—*Mine of Rayas.*—As in the previous month so in this, the points worked by buscones have continued poor in the extreme. At the same time there is not much probability of an improvement, as the ground in which they are employed is so nearly worked out. Heretofore there have been portions of the mine to which they have been allowed admission, and this extension of operations to ground new to drive, has always had the effect of renovating the sales; this resource is for the present exhausted.

Santa Cecilia.—This work having advanced during the month 6·35 varas, is now suspended. For the resumption of the work when circumstances shall be more favourable, in addition to the general rumours that have induced us to persevere so long therein, it may be remarked, that in the last two weeks there has been a change in the vein, accompanied by more frequent traces of ore.

Santo Toribio.—These workings have employed about 60 barmen by day and night; of this number 18 may be considered as employed on speculative, or unproductive work. During the month, no material change has taken place in the workings. Two ends driven from the Contra Cielos to the south-east continue the most productive, as regards both quantity and quality of ores; these works are above the general level of Santo Toribio. In this last named we have just commenced two destajos, one as a continuation of the level to the south-east, and the other a cross-cut to examine the portion of the cut in San Luis, about 50 varas to the north-west. At the time of commencing these works there has been a reduction of 20 barmen from the number heretofore employed. In the pozo of Santo Toribio, which is the deepest point pertaining to these workings, there has been no improvement; but in the end of San Vicente, which is being driven to the north-west from the side of this pozo, the ore has improved. The improvement here is remarked, as it is in a direction in which the vein has heretofore been found poor. The produce of these workings is small compared to the number of barmen, owing to the ramified state of the vein. Of dressed ores, there have been remitted to the haciendas, during the five weeks, 3401 cargas.

Mine of Aldana.—In this mine we had entertained hopes, at the date of last report, to have recommenced sinking in the shaft in a few days; but, from unavoidable delay in the conclusion of the malacate, we did not commence sinking until last Friday (March 2). From this time forward I hope to be enabled to report rapid progress.—S. P. Parkman.

MINING NOTABILIA.

[Extracts from our Correspondence.]

Birch Tor and Vitifer.—Birch Tor lode, in the 10 fathom level, east and west from Prideaux shaft, has been let to drive in a good lode. In the western part of the mine a shaft has been set at tribute from about 4 ft. under the surface, and the men are making good wages. A rise has been made above the end in the deep adit, and a good shoot of tin met with; and as this has extended 30 fms. in length in the shallow adit, it is confidently expected that there is a very profitable piece of ground, 15 fms. deep, high and dry ahead. At Dunstan's shaft, in old Vitifer lode, there has been a gradual improvement in sinking. The 10 fathom level, under the deep adit east and west, is let to drive in a lode, worth about 17*l.* per fm.; the ground is very easy, and will stand with little timber. Shares have changed hands at from 5*l.* 5*s.* to 5*l.* 12*s.* 6*d.*; there are buyers at 5*l.* for a large number.

Plymouth Wheal Yeoland.—The pare who took the shaft in the north lode at 13*s.* 4*d.* tribute are doing well. The works under the slide in the middle lode are suspended for the present. The new south lode has, since it took its regular underlay under the slide, been gradually improving, and is producing full double as much as it did last month. There has been a little demand for shares, and about 20 have changed hands during the week.

Wheal Franco.—In the 62 west there is a large orey lode, composed of can, peach, and ore, full 5 ft. wide, and the south wall has not been seen; this is the most promising thing which has been met with for a long time in this mine, and is much improving. On driving south from the 47 fm. level it has been discovered that a branch has been mistaken for the main part of the lode, which stands whole to the winze. These two important discoveries have quite changed the prospects of this mine. She profited about 100*l.* last month.

Wheal Prosper.—We are in hopes this well-known old mine will shortly be set to work. One of our neighbours, who is the principal proprietor, is now gone to London with specimens, plans, &c., to lay before a meeting of mining friends. We are informed that Mr. Richardson, mining engineer, of Whitefriars-street, who has recently been down here, has been invited to bring the merits of the mine before the public. Whoever undertakes to carry out the mine, if they do it in a proper manner, will not only gain great credit to themselves and profit to the adventurers, but confer a great benefit on the neighbourhood; for it is well known that there is an abundance of rich mineral wealth but a few fathoms below the old men's workings, which will take many years to extract, even if a thousand miners were employed constantly on it. The Great Polgooth Mine adjoining, having turned out so profitable to the new adventurers, is a great inducement for capitalists to come in. There are many persons anxiously waiting the return of our townsman, who, on ascertaining that he has got two-thirds of the shares subscribed for, will take the remaining portion themselves, or induce others in the neighbourhood to do so.

[From the *Plymouth Journal.*]

The traveller who proceeds from Plymouth by the south coast of Cornwall, must be struck at the absence of mining operations for a considerable distance of his journey; and, if he drew a character of the county by what is presented for about 26 miles, he would describe it as agricultural; but on passing by Fowey, over the sands at Par, the first mine meets his gaze, and this must give him no mean idea of the magnitude upon which such operations are conducted. The Par Consols are now in view, close by the sea, and situated on a commanding eminence. Near this mine is the artificial harbour of Par, which affords every facility for the shipment of ores', Wales, and for receiving coal and iron in return suitable for mining purposes. This mine is situated E.N.E. of the celebrated Crinnis mines, now abandoned, but which in their day shared amazing profits to adventurers, and produced princely dues to owners of the soil. So near as Par Consols are to the Crinnis workings, we are led at first to wonder that their riches should have escaped the suspicion of mining captains, who, in their underground surveys, must have gone close to those lodes which have been disclosed in the new mine. Seeing these facts, we draw the inference that districts which are often pronounced unproductive, may in after times startle persons at the pre-judgment of bygone men. The first lode in Par Consols was cut in 1838, and since then the progress has been satisfactory to all concerned—there are eight beautiful steam-engines at work, erected by Mr. West, and between 700 and 800 persons are daily employed; 75*l.*, up to January last, was the profit per share. From the works at Par a canal leads to the railway now in course of cutting towards New Quay, on the north of the county. The neighbourhood is a busy one, and must repay the attention of the tourist, who will witness a combination of scenery unsurpassed in Cornwall.

Birch Tor and Vitifer.—Birch Tor Lode Shallow Adit: A very good shute of tin has been discovered in this end. In the deep adit we have just reached the course of tin which extended 50 fms. in the shallow adit mentioned in the captain's report of the 7th Dec. last, and we expect here to have 15 fms. of very good backs for this extent (50 fms.), and then, after passing through a small piece of dead ground, we shall meet the shute of tin above mentioned. Above half a mile to the west of this we have a shaft sunk from surface on a good lode, at tribute. Prideaux shaft is not so rich as it has been.—North Lode: The ground in the cross-cut to intersect this lode is much harder than was expected; but this is a very important part of the undertaking, and should be prosecuted vigorously.—Old Vitifer Lode: This lode has gradually improved in depth, and is now considerably better than it ever before has been. The casing and dividing of Dunstan's shaft has been completed, and a plat is being cut at the 10 fm. level, that the sinking may be resumed with the least possible delay. The 10 fm. level east and west from this shaft, and from Prideaux shaft, have been let at 20*s.* per fathom.

Wheal Anderton.—A very good shute of tin has been met with at the 90 fm. level, dipping east.

Wheal Franco.—The 32 fm. level, east of Spry's shaft, has been disordered by a cross-course; but is now more settled, and producing ore. The 47 fm. level has been driven 15 fms.—the first 7 fms. was through ore ground; but the remaining 8 fms. have been poor, and the end is at present poor. At the end of the ore ground, a cross course was met with, which has thrown the lode a little south, and by boring we find that the main part of the lode is standing to the south. The hole bored in that direction south has penetrated the main part of the lode 6½ ft.—the first 2 ft. in hard capel; the last 4½ in fluor-spar and ore. This has not apparently cut through the lode; and the latter part of the boring has produced good work. The 62 fm. west is full 5 ft. wide, and only one wall seen, composed of fluor-spar and good stones of ore, and presents a very promising character.

Plymouth Wheal Yeoland.—The men are making wages in the shaft on the north lode at 13*s.* 4*d.* in 1*l.*—Middle Lode: Here the lode has been cut over the slide, but it is very much disordered.—The new south lode continues gradually, but decidedly, to improve in depth.

Herodsfoot.—This mine is in the parishes of Duloe and Lanreath, about four miles to the south-west of Liskeard, and was worked about 20 years since, and then abandoned from the want of efficient machinery. About five years since the present company was formed, and a 45-inch cylinder pumping-engine, together with a water-wheel for drawing the stuff, erected, and the old mine cleared up and found to be poor. The shaft was sunk 106 fms., and the levels extended from north to south about 120 fms., 80 fms. of which have been driven through a good course of ore, but the north end is at present disordered by a slide. The mine is paying her way, yet dividends can scarcely be expected without an improvement; but the extent of the sett and the locality warrant a spirited trial and extensive outlay.

The Liskeard District.—It is well authenticated that this district was known to the ancient tinners, and that valuable stream works were established on the moors to the north of this town; nor were miners ignorant, even in the days when it was devoutly believed that copper and tin could not live in lodes to the eastward of Truro Bridge, that large lodes, carrying gossans very much like their western neighbours, were abundant in this locality; but it was reserved to modern enterprise to develope the vast mineral wealth which lay concealed beneath the granite peaks of "the Caradon range." The lodes in the northern part of the district, for the most part, produce tin and copper, whilst those of the south yield lead. Amongst the latter, Trelawny, Herodsfoot, Mary Ann, and Trehane, hold a prominent position, whilst in the forefront of the copper mines stand West and South Caradon, which have returned to the adventurers more than 90,000*l.* profit within a very few years, and still continue to make very large profits. Amongst the young productive mines may be mentioned Gonamena, Marke Valley, the Phœnix Mines, and East Wheal Agar; whilst the Caradon Copper Mine, Caradon Wheal Hooper, Caradon United, East Caradon, the Caradon, and other mines, hold out to their adventurers great promise. It is our intention to supply our readers from time to time with brief reports of these and other undertakings, that the reading public may be aware of the position and prospects of our local mining, which forms so important an item in the national wealth of England.

WHEAL FRANCO MINING COMPANY.

At a general meeting of adventurers in this undertaking, held on the 18th inst., the accounts were examined and passed, showing—Balance last account, 354*l.* 4s. 9d.; ores sold, Sept., 498*l.* 11s.; Oct., 445*l.* 19s.; November, 329*l.* 11s.; Dec., 294*l.* 13s. 10d.; Jan., 354*l.* 13s. 8d.=2277*l.* 13s. 3d.—By labour cost and materials, Sept., 348*l.* 3s. 11d.; Oct., 477*l.* 18s. 2d.; Nov., 317*l.* 0s. 11d.; Dec., 366*l.* 0s. 9d.; Jan., 393*l.* 4s. 4d.=1902*l.* 8s. 1d.: leaving balance in favour of the company, 375*l.* 5s. 2d., from which deduct above balance on last account, shows a profit on the five months of 21*l.* 0s. 5d. Captain Edwards having tendered his resignation, it was resolved that, whilst the company deeply regret his decision, they accept his resignation, with their best wishes for his success, and the offer of such testimonials as may be of service to him abroad; and that the committee immediately direct their attention to providing a successor, or successors, to Capts. Edwards and Lean. Mr. Algar having retired from the committee, Mr. Square was added to it. The following report from Capt. R. Edwards was read:—

April 18.—The 32 fm. level, east of Spry's shaft, has been driven 3 fms., the greater part of which was in ground disordered by the cross-courses, but it is now more settled. It is hard, but, although not rich, is producing a little ore. The 47 fm. level, east of the engine-shaft, has been driven 15 fms.; the first 7 fms. was through ore ground, but the last 8 fms. have been poor, and the end is at present poor; but the main part of the lode is standing to the south, a hole having been bored in that direction 6½ ft., 2 ft. of which is in hard caple, and the last 4½ feet in fluor-spar and ore. This has not apparently cut through the lode, and the latter part of the boring has produced good work. The lode in the 62 fathom level has been cut, and driven on eastward 6 fathoms. The lode in the first part of this has been large, and composed of fluor-spar, quartz, and stones of ore; but the end is now hard and poor. This level has been driven 2 fms. west; here the lode is seen 5 feet wide, with only one wall; it is composed of fluor-spar and good stones of ore, and presents a very promising character. I am sorry to say the quantity of ore ground laid open since the last meeting has not been equal to that taken away; and, without an improvement in the lower levels, this diminution of ore ground must continue; but I have great hopes that an improvement will take place, which will not only keep up the supply of ore ground, but lead to something important in favour of the mine. The lowness of the standard has been very seriously felt by the company since the last account; and, as we have the average of the previous month's public sale, we have not yet felt the benefit of the great improvement which has taken place. This will be found in the next two months, and I may, therefore, confidently promise you a profit of at least 300*l.* in that time.

BLAENAVON IRON AND COAL COMPANY.—A meeting of shareholders was held at the offices, yesterday, at which a favourable report was presented, and an interesting discussion ensued, of which we have a detailed report, but the insertion of it, however, is necessarily deferred until next week.

WEST WHEAL PROVIDENCE.—At a meeting of adventurers, held at the mine, on the 18th inst., the following statement of accounts was allowed, and a dividend of 2*l.* per share was declared:—By balance from last account, 41*l.* 6s. 4d.; ores sold (less dues), 1094*l.* 7s. 5d. = 1135*l.* 13s 9d.—To costs and merchants' bills for Dec., Jan., and Feb., 597*l.* 5s. 7d.; dividend of 2*l.* per share, 512*l.* = 1109*l.* 5s. 7d.: balance in favour of adventurers, 26*l.* 8s. 2d.

WHEAL TREMAYNE.—A meeting of adventurers was held yesterday week, when the following accounts were submitted and allowed, and Mr. Richard Thomas was appointed secretary instead of Mr. Henry Thomas, who has obtained a situation in Spain:—By ores sold in February, March, and April (less dues), 2625*l.* 5s. 10d.; West Wheal Providence water charge, 24*l.*; carriage of tin and debts, 19*l.* 10s.=2668*l.* 15s. 10d.—To balance from last account, 181*l.* 10s. 8d.; costs and merchants' bills for January and February, 2172*l.* 0s. 6d.=2353*l.* 11s. 2d.: leaving balance in favour of mine, 315*l.* 4s. 8d.

WHEAL WALTER.—A meeting of shareholders in this mine, convened by requisition to the honorary secretary, Mr. Crofts, was held at 4, King-street, on the 19th inst., when the purser Mr. Walter Weekes, being present, a full and complete investigation took place into his claims, and the accounts of the mine generally, which ended in a series of resolutions for the liquidation of all claims fairly due and owing by the mine, and a call of 10s. per share was made, payable in 28 days. A resolution was then taken, "That the solicitor of the company be instructed to enforce the payment of all calls in arrear, so far as the solvency of the parties will justify such proceeding."

COAL MINES.—In the House of Lords, last night, the Bishop of Durham presented a petition from Newcastle, praying for the introduction of some measure to force proprietors of coal mines to adopt more efficient measures to prevent explosions in coal mines.—The motion of Mr. Hume stood on the order book of the House of Commons for Thursday last, but the hon. gentleman postponed it during the evening.

MUESELEE'S SAFETY-LAMP.—Having been applied to by more than one correspondent for a description of this safety-lamp for coal mines, and the subject of the prevention of explosions being, at the present moment, of such widespread interest, we will with pleasure endeavour to convey a tolerably correct idea of its construction, which, we think, may be perfectly well understood without a diagram. This lamp is is in general use in all the coal mines of Belgium, giving a superior light to a naked candle. The base of the lamp consists, as in the "Davy," of the oil cylinder, with its wickholder, trimmer, &c. This is surrounded to about half the height of the lamp by a cylinder of thick, well annealed glass, protected on the outside by upright bars of metal. Above this is the wire gauze casing, through which air enters, and the heated products of combustion escape. Within the body of the lamp, and immediately over the wick, at such a height as not to obstruct the light, is placed a conical cylinder of thin sheet-iron, reaching to within an inch of the top. This causes a rapid draught of atmospheric air to descend from the lower parts of the gauze, and play around the wick, giving, at the same time, egress for the heated products of combustion, which escape from the upper portion of the wire cylinder, by which means a steady and uniform light is obtained. We are indebted to a communication from Mr. G. Montefiore Levi, a mining engineer in Belgium, for some of these particulars; and also two well-executed pen-and-ink drawings of the lamp, in section and perspective view, which may be seen at our office. It is, however, but justice to state in this notice that the Mueseler's lamp is decidedly on the principle of Dr. Reid Clanny's last patent.

HIGH-PRESSURE STEAM.—It is stated that this mode of mine ventilation is also about being tried in one of the Swansea Coal Company's collieries.

THE BISHOP'S LEAD MINES IN WEARDALE.—When Bishop Barrington was promoted to the see of Durham, the agent for the Beaumont family waited upon him, as is usual under those circumstances, to agree for the sum to be paid in lieu of the ninth bin of the ore to which he was entitled under the lease for three lives on which the lead mine was held. The Bishop told the agent that he was ignorant of the value of the "lot ore," but was ready to agree to whatever price he said it was worth. The agent estimated the value at 800*l.* a-year, which was about the sum paid to the former Bishop; but he afterwards valued it at 900*l.*, which sum was agreed upon as the rent to be paid during the Bishop's incumbency. It, however, turned out that the "lot ore" was worth 4000*l.* a-year; and the Bishop having been advised by his friend, Sir Samuel Romilly, to file a bill in Chancery, he obtained a decree for a rent of 4000*l.* a-year, and for all the arrears (70,000*l.*) He laid out about 10,000*l.* of the arrears in building and endowing a school at Bishop Auckland. Other portions of the money were applied to increasing the living at St. Andrew's Auckland (which was very small), and to various charitable purposes. The rent for the mine continued at 4000*l.* a-year during the late Bishop's incumbency, but it is now increased 3750*l.*; and the rector receives 3750*l.* for his tenth bin.—*Church Leases* (Ridgway, London, 1839).

COAL TAR.—Mr. R. A. Smith, of Manchester, has obtained a patent for some improvements in the application and preparation of coal tar, which are described by the *Mechanics' Magazine* to consist in the preparation and application of coal tar to coating the interior surfaces of water pipes. The coal tar is first reduced by distillation or otherwise, to a thick pitch-like mass, and placed in an open vessel, of sufficient depth to contain the pipes to be operated on, where it is heated to 300° Fahr., or to a temperature at which the coal tar becomes fluid. The interior surfaces of the iron pipes are freed from oxide, and covered with linseed oil, to facilitate the adhesion of the coal tar, in which they are immersed for about an hour, after having been previously heated to 300° Fr. When the pipes are liftted out, linseed oil is poured into them, which removes any excess of coal tar, and serves, at the same time, to keep the contents of the vessel fluid. Or the pipes may be placed cold, after being cleansed from the oxide in the melted coal tar, and kept there until they are of the same temperature, which the patentee states he has genarally found to take an hour and a half. *Claim.*—Coating the interior of waterpipes with coal tar by aid of heat.

A notice appears in the *Daily News* of yesterday, that Evan Evans, a miner, who left Liverpool for Cork, on the 5th Sept. last, in company with Henry Jones, can hear of something to his advantage on application to John Bill, Mold, North Wales.

Cumwson Copper-Works.—D. Llewellyn was killed by a fall of a large piece of rock from the roof of the colliery.

Cumbran Colliery.—G. Benjamin was killed by a stone falling on him from the top.

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£23¼ 23½
20,000	British North American	50	6	41½
20,000	Colonial	25	5	6¾
—	Commercial of London	20	6	20½
4,000	Ionian State	25	6	24½ 25
20,000	London Joint-Stock	10	6	14¼
20,000	London and Westminster	20	6	24
10,000	National Provincial of England	35	5	35
20,000	National of Ireland	22½	5	18¾
20,000	Provincial of Ireland	25	8	32½
4,000	Ditto New	10	8	13
—	South Australia	22½	—	24 23½
20,000	Union of Australia	25	6	24½
10,000	Ditto New	2½	6	2
60,000	Union of London	16	6	16¼ 16½

INDURATED AND IMPERVIOUS STONE WORKS.—We have on former occasions called public attention to Messrs. Hutchison's patent for indurating sandstone, and rendering a variety of other materials, naturally of a soft and unindurable nature, hard and indestructible. Like all other inventions and discoveries of novelty and utility, the patentees have, during the past 12 months, had an immense deal of uphill work to contend with. Individual interest, deep rooted prejudice in favour of some particular kinds of material, or the backwardness always evinced in adopting new, although improved, processes of manufacture, have alike prevented that general introduction of these highly-important and elegant substitutes for the common building materials, which parties engaged in the several branches of building, architecture, and decoration, would find greatly increase their own profits, while the public would be generally benefitted. Perseverance will, however, conquer all difficulties, and we are happy to find that, with the advance of the present year, and the gradual improvement which has taken place in most trading interests, the patentees have found an increasing demand for their material, and it is highly encouraging to know that, where they have once constructed any description of works, they have given the greatest satisfaction, and secured an earnest of future favours. By this process, stone, chalk, plaster of Paris, alabaster, bricks, sand, wood, paper, and all absorbent materials, are made impervious and compact, resisting all weather, vermin, and other destructive agents. Works are also executen by them in paving, kerbing, macadamizing, pitching, gutters, drains, sewers, &c., and all description of building, hydraulic, decorative, and monumental constructions, cheaper and more durable than any other stone. All these indurated materials take a polish equal to the richest marble at one third the cost. A notice appears in our advertising columns for agents in all large towns; to whom, with business habits, and the employment of a small capital, we cannot doubt but it will prove a highly lucrative employment.

ELECTRIC LIGHT.—The new ballet at her Majesty's Theatre has been identified with the electric light. The critiques of our daily contemporaries have made the public familiar with the subject of the piece. It may be interesting to the scientific portion of our readers to be furnished with some of the details behind the scenes, and we are in a position so far to oblige them. The battery is placed on the roof, constantly attended by two or three men; and, it will be hardly credited, that after all the expense of the numerous patents, for perfluent, percolating, syphon, and other batteries, the high compliment is paid to the Rev. Dr. Callan, the suggestor of the Maynooth battery, of giving that battery the preference. There are about 75 cells of the largest size; about 400 yards of (say of No. 14) copper wire, insulated, are used as the conductors to the machine for regulating the carbon points. The lamp, or machine, appears to be the same, or of the same construction, as that heretofore used at Trafalgar-square. It is set in operation some time before the light is required, so as to preclude any delay in exhibiting it to the audience, and kept covered till called into requisition by the appropriate incident of the piece. It stands before an immense parabolic reflector, and throws a most intense glare of light on the principle *danseuse*. The duration may be from 3 to 5 minutes. After the ballet, we understand a private display took place, the curtain was raised, and the house flooded with the electric rays, totally obscuring all other lights. Mr. Staite is the patentee selected by Mr. Lumley's patronage. The actual expense of this short exhibition, without including any profit to the patentee, is, we are told, 2*l.* per night; *no doubt*, the chemical *products* compensate for this outlay—otherwise, *le jeu ne vaut par la chandelle*. We fear the economists will say, if five minutes cost 2*l.*, one hour will cost 24*l.* The cost for such a purpose is not the consideration at present. A worse feature, however, is that Mr. Staite apparently abandons his patented batteries. We have been also informed, that the directors of the Hungerford Suspension Bridge have placed at Mr. Staite's disposal one of the towers, where his light is to be very soon exhibited—a very appropriate place, we should say, if we may be excused the pun—as we have been kept so long in *suspense* as to its reappearance.

PUBLIC WORKS.—A mass of accounts, laid before Parliament, on the motion of Mr. Parker, M.P., show that the sums advanced to borrowers by the Commissioners of Public Works, from the year 1817 up to the 1st January last, amount to 7,635,010*l.*; the interest paid, to 2,150,997*l.*; the principal repaid, to 5,356,053*l.*; and the balance of principal unpaid, to 2,278,956*l.* The amount advanced (7,635,010*l.*) is thus divided—viz.. 1,470,600*l.* for canals, rivers, and drainage; 554,110*l.* for docks and harbours; 285,500*l.* for bridges and ferries; 57,000*l.* for water-works; 250,500*l.* for the Thames Tunnel; 33,700*l.* for fisheries; 657,270*l.* for roads.; 490,600*l.* for railways; 666,800*l.* for the improvement of cities and towns; 80,750*l.* for compensation for damage during riots; 303,700*l.* for collieries and mines; 176,700*l.* for churches and chapels; 2700*l.* for relief of parishes; 108,000*l.* for colleges; 496,640*l.* for law courts, gaols, lunatic asylums, &c.; 1,970,900*l.* for the building and enlarging workhouses; and 15,550*l.* for emigration. The amount of principal and interest received by the hon. commissioners, on account of loans advanced, and returned to her Majesty's Exchequer, to the 5th January, 1849, was 7,507,051*l.*

SALES OF ASSURANCE OFFICE POLICIES.—Among the public sales of various properties at the Auction Mart during the week, Messrs. Musgrove & Gadsden sold the following policies of assurance. Two annuities, together 150*l.* per annum, less legacy duty, during the life of a gentleman aged 57, and a policy of insurance for 1600*l.*, with 183*l.* 18s. 3d. accumulations, and annual pm. 45*l.* 12s., sold for 1715*l.* An annuity of 100*l.* per annum during the life of a lady aged 68, with arrears of 222*l.*, policy for 1050*l.*, and 188*l.* accumulations, annual premium 30*l.* 16s. 7d.—800*l.* An annuity of 60*l.* in the Pelican Company, on the life of a lady aged 59, and a policy in the Economic for 650*l.*, with 90*l.* accumulations, annual premium 15*l.* 15s. 4d.—500*l.* A policy of assurance for 1400*l.*, on the life of a gentleman aged 64, annual premium 50*l.* 3s. 4d., paid to Christmas next, with bonuses 315*l.* 7s.—580*l.* Thirty 120*l.* shares in the Asylum Assurance Society, 30*l.* paid, no further calls expected, dividend 5*l.*, bonusses 2*l.*, sold for 50*l.* to 52*l.* per share.

EVADING DUTIES ON TRANSFER OF SHARES.—The Inland Revenue Commissioners having been informed of the existence of a practice of omitting the full amount of the purchase money in the transfer of railway and other shares, whereby the revenue is much injured, have issued a notice, in which they state that the penalties of the law on the subject will be strictly put in force in future against all offenders, and offer liberal rewards to all who shall give information of the commission of such frauds. The penalties for not truly stating the amount of consideration money in the deed of transfer are, on both purchaser and seller, 50*l.*, and five times the amount of duty evaded by the omission; the person employed in preparing the transfer incurs a penalty of 500*l.*, and if he be a solicitor, attorney, or writer to the signet, he is, on conviction, thenceforth disabled from practising. Either of the parties giving information of the transaction is to be indemnified and discharged from his liability to the penalty, and may be rewarded by the commissioners to one-half the amount recovered from the other party; the purchaser may also recover back by an action at law so much of the purchase money as is not set forth in the transfer, or the whole, if no part is set forth.

PATENT KAMPTULICON COMPANY.—In the Court of Common Pleas, on Saturday, Mr. Willes moved for a rule, in the case of Greville *v.* Walter, to show cause why proceedings shall not be stayed until the plaintiff had proved his right to proceed under the provisions of the Winding-up Act. Judgment had been obtained against the defendant as a member of the Kamptulicon Company, and a writ had been issued, under which certain goods had been taken in execution, which were alleged to be the property of the company. In February last an official manager was appointed under the Act referred to, and it was under the 78d section of the Act that the application was made The object of the statute was to compel every creditor to come in before the Master to prove his debt, in order that the Master might know what the sum was which was owing by the company, to enable him to regulate the calls upon the members, so as to discharge the liabilities of the company; also to prevent the injustice of suits by one member of a company, against whom a judgment had been obtained, against his co-members for contribution.—The Court said, as this was a novel application under a new statute, it would be well to consider it.—Rule *nisi* granted.

DIRECT LONDON AND MANCHESTER RAILWAY COMPANY.—The Lord Chancellor having last week decided that this company came within the operations of the Winding-up Act, and which decision reversed an order of Vice-Chancellor Knight Bruce, who declared it was not, was applied to on Wednesday last by Mr. J. H. Palmer, to fix the date of the winding up, as there was a doubt whether it should commence on the day on which the petition was presented, or from the date of his lordship's order. The Lord Chancellor was of opinion that the winding up should date from the day in which he made his order. Yesterday Mr. Daniel asked for the suspension of all proceedings until the company had obtained the decision of the House of Lords in an appeal intended to be entered against this judgment, when the Lord Chancellor refused, observing, with warmth, that he might just as reasonably be requested to repeal the Act of Parliament.

A "PROVISIONAL DIRECTOR" IN TROUBLE.—In the Insolvent Debtor's Court, yesterday, John Alexander, who was described as a "provisional director," applied to be discharged. It was elicited from him that he was a cheesemonger in Norfolk, and came to London when bubble companies were in vogue. He was recommended to the "Madras and Harcourt Railway," and became a "provisional director." The insolvent was also a director of the "Australian Railway and Sydney Dock Company" with the two persons mentioned. He had paid 50*l.* on account of the companies, and got nothing in return. He owed for inkstands, newspapers, and office fixtures. The insolvent said the parties belonging to the companies were a "bad lot."—Mr. Commissioner Phillips told him he was a good authority, and he was a pretty sample of the lot. (A laugh.) He remanded the insolvent for six months from the vesting order. The time had expired; but the public should know the opinion of the court with respect to this "provisional director," who was described in the prospectus as an "Esquire."

CALIFORNIA.—Although we have received, through the United States' papers, some little apparently authentic information of the quantities of gold already received from California, the accounts are by no means of that clear and tangible character as to the numbers employed, the state of society, &c., which we might have expected after a lapse of so many months. A Valparaiso date of Jan. 29 says—"The California excitement still continues, and the news from that country is as marvellous as ever. Remittances of gold continue to come forward in sums of $ 50,000 to $ 100,000, and besides the 21 expeditions already gone from this place since September, there are at this moment 13 vessels on the berth, taking provisions, wines, brandies, manufactured goods, gold and silver coin, and passengers of all classes. We understand there are a number of whale ships at the Sandwich Islands, unable to move, owing to their crews having deserted for California." The quantity of gold received in the United States is variously stated; that which appears the most legitimate statement makes it about $ 220,000 to the end of March. $ 32,000 worth were received in Boston, among which were native lumps, one of which weighed nearly 5 ozs. From the general accounts, it appears that the gold finders have had rather severe weather to contend against during the past winter; it is probable that the miners are at work, although it would take a good deal of sunshine and warm weather to thraw the great body of snow which had fallen in that region, so as to allow them to dig. Nothing is said about the probable yield of the mines, or the number of men at work at the *placers*; but this is accounted for by the fact that but a few numbers of the new newspaper, the *Alta California*, have been received, and the subject was perhaps too common there to be mentioned particularly, although it may have been treated at length in other copies of the same paper, which have not been received; but the spring freshets from the immense body of snow on the placers in January will wash out the gold in great quantities. The *Sydney Shipping List* says:—"The very extraordinary accounts from California of its great riches alone occupy the attention of every one, and in consequence little is thought of business generally. The great amount of goods purchased have been for the above destination, where speculators, it is anticipated will secure a rich harvest. It is to be hoped that we shall find there an outlet for a considerable portion of our surplus provisions, which are procurable here at very low rates, to the entire exclusion of those imported."

CHAGRES, MARCH 25.—In the scramble of the Californian movement, I have just time, in a canoe, to forward you a few lines. The *Crescent City*, from New York, arrived here yesterday, with 300 emigrants for California, bringing news from New York to the 16th inst., and from England *viâ* New York, to the 25th February. There are now on the Isthmus, say about 1400 passengers, and no conveyance from Panama. The *California* steamer, due at Panama, from San Francisco, on the 13th inst., has not yet arrived from her first trip on that route—supposed all her crew have deserted for the gold region. The agent here, at Chagres, for Mr. Law's line of steamers from New York, has established a depôt at Porto Bello for coals for the steamers. The engineers are surveying the old road from that port to Panama, which, in my opinion, having some knowledge of the Isthmus, should be the road; the expense would be but trifling in comparison to route either by Nicaragua, or Tehuantepec, and those who advocated the two latter are looking to private interest instead of the general benefit. I arrived here this morning by the royal mail steamer *Medway*; the passengers for the southern Pacific ports will find difficulty in getting forward to join the steamer on that side. Canoes of a moderate size to Gorgona, $70 to $80; a small canoe, $30 to $40. It is amusing to look on quietly. American emigrants opening their trunks on the beach, and disposing of various articles at low prices, finding themselves short of cash, to get forward. Some have been over to Panama, and finding no mode of conveyance, are returning to the States by the *Crescent City* steamer; in fact, two-thirds of them appear quite adrift, and had not the slightest idea of the journey. The Isthmus is quite healthy—a few cases of dysentery and fever, which must be expected. I start immediately for Gorgona, paying $70 for a canoe. There are two wrecks in Chagres Bay. From what I have already gathered, the California accounts are exaggerated, but by next steamer I shall be able to give you a more lengthy account. The information, as it is, you may depend upon.—*Morning Chronicle* of this morning.

MORE GOLD.—The American papers, not content with California, have discovered a newer and richer El Dorado nearer home. The glowing descriptions published of this far exceed any even from California. This new region of riches is said to exist in Catwaba county, in the province of Carolina; the gold there is found in larger quantities than on the banks of the Sacramento. One lucky individual, rejoicing in the name of Johnson, collected in an hour a bushel of gold dust, which on washing produced 1980 dwts. of pure gold!

REDUCTION OF DUTIES ON METALS IN SPAIN.—The duties, which have for a very long period existed in Spain on the importation of foreign metals and machinery, and which from their heavy amount have almost acted as a prohibition, have been thoroughly revised, and the new tariff is expected to be immediately issued by the Government. It is generally believed that such a reduction will be made as will greatly increase the commercial intercourse between this country and Spain. The difficulty of obtaining machinery, except at exorbitant prices, has tended greatly to obstruct the development of the mineral wealth of the country; but the Government, by this reduction of duties, will evince a wise desire for the interest of mining adventure and railway enterprise. The movement has already induced some wealthy French and Spanish capitalists to undertake the completion of the railway from Barcelona by Valencia to Madrid, which will create a large demand for rails, locomotives, and machinery. This reduction of duties on foreign produce will tend greatly to the increase of wealth and happiness in the country, and most probably place her, in a commercial view, in a highly respectable position among European nations.

At Adelaide, South Australia, a project for the disposal of town and country lots by lottery, on the principle adopted by the Bank of Australia at Sydney, to the amount of 25,000*l.*, in 5*l.* shares, had been started, and was expected to meet with immediate success. The first 1000 sheep of the present year had been boiled down at the establishment at Adelaide, and the result was a net produce of 26½ lbs. of tallow per sheep. Mutton hams had been cured for exportation. At Port Lincoln a quarry of pure white marble had been discovered, as also copal, and the singular mineral asbestos. At Portland plumbago is said to have been discovered also.

ARTIFICIAL LIGHT.—The following is an estimate of the sum expended annually in England and Wales for artificial light:—Gas consumed in London 546,000*l.*; in cities and country towns, 5,400,000*l.*; oil in lamps, 1,350,000*l.*; tallow and stearine candle, 210,000*l.*; camphine and other lamps, 80,000*l.*—total, 11,336,000*l.* This shows the prime cost only of the several materials, and not the price paid by consumers.

THE NEW CITY GAS COMPANY.—The Great Central Gas Consumers' Company's bill, with additional provisions for the construction of works without the limits of the City, was yesterday submitted to the Standing Orders Committee. Mr. Bryden and Mr. W. D. Wire appeared for the promoters, and Mr. Tyrall and Mr. Hall for the City Gas and the Chartered Companies, who opposed the scheme. The committee, after some deliberation, decided that the standing orders, so far as related to the additional provisions sought for, *had not been complied with*.

WEST CORNWALL RAILWAY.—Some of the directors of this company have been on the line, and have also been in communication with the landowners of the district. We understand that the results of their inquiries and communications are satisfactory, and that arrangements are in progress for the removal of the difficulties which have hitherto impeded the commencement of the works.—*Cornwall Gazette.*

ELECTRIC TELEGRAPHING IN ENGLAND ADVERTISED TO BE INSTANTANEOUS, ACCURATE, AND CHEAP.—Several Liverpool merchants on 'Change called our attention to a letter in the *Times* of yesterday from Mr. J. L. Richardo chairman of the Electric Telegraph Company, upon which we would at present merely remark that it is not surprising that the electric telegraph is but little used in England, when the company demanded, on the 26th inst., 13s. 1 fo transmitting from London to Liverpool the following short message;—

Lil. Hl. Db. Sixty-eight half Nine-fourth.
E. Avax. O. G. S. T. Three-ten.

Only 48 letters; and at this exorbitant rate they say they do not guarantee the correct transmission of a message unless paid for as a "repeated message," so that under that infliction the public would have been mulcted of 21s. for sending 48 letters. See how the thing is done in America:—We lately sent a message, of greater length, from New York to New Orleans and back, about 4000 miles, for 8s., and it was accomplished in 70 minutes. Here is another fact:—We had, on the same day, a message, containing more than 48 letters, sent from Philadelphia to New York. On its delivery we paid 1s. for its transmission, and 1d. for delivery. In these two American messages there was not a single mistake!!! In those which we send daily in England constant mistakes are made, by which the message is rendered useless. We ask to have the errors corrected; they say—Yes; pay us half the sum already paid, and we will correct our own blunders. Make a similar request to the railway companies here, relative to the non-delivery of a parcel, and you get an immediate remedy, with a polite apology for the error they had committed. As this is a subject of great public interest we will prepare and publish a full statement of our business with this company for the 117 days of this year; and there exhibit, in a tabular form, the number of messages, number of letters contained in each, cost of each, errors in transmission, time taken in the transmission of each, and all other particulars of interest to the public, with extracts from their Act of Parliament.—From the *European Times.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Chester Main 15—East Adair's Main 13—Hasting's Hartley 14 6 to 15—New Tanfield 13—Original Tanfield 13—Ravensworth's West Hartley 14—Wall's End Gosforth 16—Hebburn 15 9—Heaton 16—Hedley 16—Percy Benaham 15—Walker 16—Lambton Primrose 17 6—Braddyll's Hetton 18 6—Morrison 15 9—Kellce 18—Bishop's Tees 17 3—Parson's Craigola 21.—Ships at market, 57; sold, 29.

WEDNESDAY.—Bate's West Hartley 14—Buddle's West Hartley 14 6—Carr's Hartle 14 6—East Adairs Main 12 6—Holywell Main 14 6—Newcastle Hartley 13—North Pere Hartley 14—Ord's Redheugh 12 6—West Hartley 14 6—Wall's End Percy Benaham 15—Riddell's 16—Braddyll's Hetton 19—Cassop 17 6—Heugh Hall 16 9—Thornley 17—Hartley 14.—Ships at market, 37; sold, 27.

FRIDAY.—Carr's Hartley 14 6—Adair's Main 13—Hastings' Hartley 14 6—Holywell Main 14 6—New Tanfield 12 9—Newcastle Hartley 13—Ord's Redheugh 13 6—West Hartley 14 6—Hartley 14.—Ships at market 14; sold 11.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 194 2½	Belgian, 4½ per Cent., 84 83¾
3 per Cent. Reduced Ann., 90¾ ¼	Dutch, 2½ per Cent., 50¼ ¾
3 per Cent. Consols Ann., 92 ½ 2	Brazilian, 5 per Cent., 79¾
3¼ per Cent. Ann., 91¼ ¾	Chilian, 6 per Cent., 92 1
Long Annuities, 8¼	Mexican 5 per Cent., 32 1½ ¼
India Stock, 10½ per Cent., 246	Russian, 5 per Cent., 105¼ 4½
3 per Cent. Consols for Acc. 92½ 2 ¼	Spanish, 5 per Cent, 17¾ 16¾
Excheq. Bills, 1000*l*. 2*d*. & 1½*d*. 47 44 47 pm.	Ditto 3 per Cent., 32¼ ¾

MINES.—Since our last a favourable change has taken place, and considerable business has been transacted in the mining share market. For our leading and dividend-paying mines there is a constant inquiry, but sellers appear to be holding out for advanced prices. From our local correspondents we learn that several improvements have taken place during the week, and that the mines in the great mining districts are generally looking well.

In Devon Great Consols there has been several transactions during the week, and the bargains effected have been rather under last weeks quotations, although the mines generally have improved considerably during the week; some important discoveries have been made, and the bottom levels in Wheal Anna Maria are also improving.

Buyers continue to appear for South Frances, South Basset, West Buller, Carn Brea, Trelawny, West Caradon, and several others of the favourite mines.

In Kirkcudbright shares there has been some business, from the manifest improvements which have taken place recently.

A correspondent writes us that "at the Cairnsmore mine they have, during the last week, cut into a very rich course of ore in the 50 fm. level east, and they have recently met with the same mineral as accompanied the great deposit in Black Craig Mine." The recent discovery in the 50 fm. level, in Cairnsmore, is extremely interesting, it being the deepest level in this extraordinary mineral district, and must prove a great incentive to capitalists working the several veins in the neighbourhood. A cargo of silver-lead was shipped from Black Craig within the past week, which it is expected will be followed by regular periodical shipments.

At Herodsfoot a great improvement has taken place in the bottom, or 106 fm. level, where the lode is now very large, and moderately rich throughout. The agents calculate in continuing to sample 100 tons per month.

Grambler and St. Aubyn have improved; in the adit level of the former mine a lode was cut a short time since, worth about 12*l*. per fathom, and still continues productive.

Tamar Consols and Tincrofts have been in demand throughout the week, at a corresponding advance, in anticipation of an approaching dividend.

During the week shares in the following mines have changed hands:—Devon Great Consols, South Wheal Basset, Treleigh, Mary Ann, Camborne Consols, Trelawny, Kirkcudbright, Trehane, Condurrow, Mendip Hills, Tamar Consols, Treviskey and Barrier, East Pool, Tincroft, Ashburton United, Esgair Lle, Cwm Erfin, South Tolgus, Bedford United, East and South Tamar, Great Rough Tor Consols, &c., &c.

The accounts presented at the Wheal Franco meeting showed a balance in favour of the company of 375*l*. 5*s*. 2*d*., although the profits of the last five months amount only to 21*l*.; but an expenditure of nearly 100*l*. has been made during that period for necessary machinery, which will not be required again, a full explanation being given in the committee's report. The captain's report clearly presents a general improvement, with more cheerful prospects than they have had for some months, and also anticipated a profit of at least 300*l*. for the next two months, consequently the mine will be in a position to pay a dividend at the next audit.

At the West Wheal Providence meeting the accounts showed a balance of 538*l*. 8*s*. 2*d*. A dividend of 2*l*. per share was made, leaving a balance in hand of 26*l*. 8*s*. 2*d*.

At the meeting of the Tremayne adventurers the accounts were audited, showing a balance in favour of the mine of 315*l*. 4*s*. 8*d*.

Dispatches have been received by the Bolanos Mining Company, and the United Mexican. The Bolanos letters are to the 5th March, and represent the progress making in the erection of necessary machinery connected with the engine. Some little improvements have been made in the underground operations, but which are retarded by increase of water, and now wait the completion of the engine before any important discoveries can be effected; at the same time, considerable improvements are anticipated, from the general opinion that they are approximating a "bonanza," strengthened by the appearance of some rich stones of silver ore which have already been discovered in the lode laid down in the plan No. 3; consequently, the next accounts are looked forward to with some degree of interest.

The United Mexican letters are to the 8th of March, and states that the cheering prospects conveyed in the former advices have disappeared for the time. The agent's report represents recent improvement in the Santa Cecilia Mine, being accompanied with more frequent traces of ore. In the end of San Vicente a favourable change has taken place, but the general appearances are not so encouraging as the last account. The next remittance will leave in May, but the amount cannot be now advised.

In foreign mines there has been an active inquiry, especially for St. John del Rey and Australian shares, and several bargains done at advanced prices. There has also been inquiries for North British Australasians at former quotations, but none are obtainable at such prices. Some shares in Guadalcanal have changed hands under our present quotations, but sellers generally are looking for better prices. United Mexican, Bolanos, Cobre, and Copiapo, have also been done.

The following arrivals of specie have taken place since our last:—The Peninsular and Oriental Steam Company's ship, *Indus*, arrived at Southampton on Monday, having on freight 67 packages of specie, value 69,848*l*. sterling. The Royal Mail steam-ship, *Great Western*, arrived at Southampton on Tuesday with the West Indian and Mexican mails, bringing on freight $390,000, none of which are for account of Mexican bond holders. The Peninsular and Oriental steam-ship, *Jupiter*, arrived at Southampton on Tuesday night, having on freight 15 packages of specie and general cargo.

HULL, THURSDAY.—We have to report a continued depreciation in the share market, although the amount of business has rather increased. The Eastern Counties report will be in the shareholders' hands to-morrow, we expect. A meeting of North British shareholders, held here to-day, will probably decide upon some steps as to a committee of investigation.

RAILWAY TRAFFIC RETURNS.

Names of Railways.	Lgth. Rway.	Present actual cost.	Price per share	Div. 1848	Traffic Returns 1849	1848
Belfast and Ballymena	37¾	—	21	5 p. c.	£ 558	—
Birkenhead, Lancashire, & Chesh.	19	1,088,804	37	5 p. c.*	791	635
Bolton, Blackburn, & West Yorksh.	14	786,384	7½	—	402	—
Caledonian	141	4,865,135	27½ 6¾	—	5024	3555
Chester and Holyhead	84	3,014,602	17½	4	1361	—
Dublin and Drogheda	35½	774,875	33	—	854	716
Dublin and Kingstown	7½	395,915	—	—	642	704
Dundee, Perth, & Aberdeen Junc.	47½	544,554	24½	8	1014	850
East Anglian (Lynn to Ely)	67½	1,167,104	3½	—	704	447
East Lancashire	50	2,628,519	16¾	5	2784	965
Eastern Counties and Norfolk	309¾	12,027,069	8 7½	4	15066	15203
Eastern Union	50½	1,712,703	13	—	1115	1032
Edinburgh and Glasgow	57½	2,644,378	42	6	3632	3072
Edinburgh and Northern	78	2,232,115	12½	4*	1892	1223
Glasgow, Paisley, and Ayr	102½	2,286,353	57	4	2600	2026
Glasgow, Paisley, & Greenock	23	848,328	13¾	4	984	951
Gt. Northern & East Lincolnshire	110	4,255,171	11 10¾	5*	2214	—
Gt. Southern & Western, Ireland	131	2,844,897	34	4*	4090	2110
Great Western	305¾	11,608,815	90	7	21287	18701
Kendal and Windermere	10½	174,600	25¾	—	139	124
Lancaster and Carlisle	70	1,476,102	51½	4	2146	1602
Lancashire and Yorkshire	206½	9,218,450	72	6	11278	9176
London and North Western	435	25,077,942	131 28	7	40303	37410
London and Blackwall	4	1,299,675	5¾	1-12	605	720
London, Brighton, & South Coast	162½	6,382,281	39 8½	2½	9331	7006
London and South-Western	216½	7,510,689	36 5	6	8996	7572
Londonderry and Enniskillen	14½	171,026	16	—	136	154
Manchester, Sheffield, & Lincolnsh.	91½	6,048,679	36	5	3617	2315
Midland Company	471	14,042,340	69½ 6½	6	20898	19210
Midland Great Western (Irish)	50	725,332	23	4*	1370	1088
North British	99	3,163,450	14	5	2876	1774
Scottish Central	45½	1,364,228	24¾	—	1064	—
Shrewsbury and Chester	47	969,618	18¾	5	1433	554
South Devon	55½	1,909,232	16¾	—	1509	782
South-Eastern	165½	8,116,914	22 21½	6¾	7610	6918
Taff Vale	38	879,110	—	6½	1881	1681
Ulster	36	684,684	45¾	—	747	952
West Cornwall	13	—	—	—	—	—
Whitehaven Junction	12	150,879	109	3	—	172
York, Newcastle, & Berwick	269	6,827,849	20¾	8	11604	10336
York and North Midland	255¾	4,988,016	37 6	8	7242	7889
FOREIGN RAILWAYS.						
Amiens and Boulogne	76½	878,338	8¾	4	1458	—
Dieppe	26	—	—	—	354	—
Dutch Rhenish	57½	—	½	—	869	957
Montereau and Troyes	71½	—	—	—	908	—
Northern of France	211	2,000,000	11½	—	14810	9076
Orleans to Bourges (Central)	107½	—	—	—	2652	2285
Orleans to Tours	72	600,000	32	6	4246	2645
Paris and Orleans	82	2,011,720	22½	13½	8408	6811
Paris and Rouen	85	2,082,916	22½	—	4652	3038
Rouen and Havre	59½	—	11½	—	2458	1315
Strasburgh and Basle (monthly)	88	—	6	—	5040	5294
West Flanders (ditto)	—	—	1½	—	997	—

* Interest.—Total for last week, £201,347, being an increase of £32,532 over last year.

PRICES OF MINING SHARES.

Shares.	Company.	Paid.	Price.
	BRITISH MINES.		
1000	Abergwesin	8	3
1024	Alfred Consols	8¾	7½
1000	Antimony&Silver-Lead	5	5½
1024	AshburtonUnited Mines	8¾	12
1624	Balleswidden	9	18
128	Balnoon Consols	42½	50
10000	Banwen Iron Co.	6	6
1000	Barristown	5½	1½ 2
4000	Bedford	2¼ 3	3¼ 3½
1244	Birch Tor Tin Mine	9	5 5½
8000	Blaenavon	50	12½
100	Botallack	182	25
120	Brewer	5	3
10000	British Iron, New, regis.	12	8
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	12½
1000	Callington	20	10 12
1000	Camborne Consols	5	3
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	1½
256	Caradon Mines	22½	10
256	Caradon United	24	5 8
256	Caradon Wh. Hooper	21	4½
1000	Carn Brea	15	104
3000	Carthew Consols	1¼	5
114	Charlestown	220	—
500	Comblawn	5½	4½
128	Comfort	45	75
256	Condurrow	20	90 100
2560	Cook's Kitchen	14	2½ 3
1000	Coombe Valley Quarry	3½	4½
1000	Copper Bottom	1¼	6½
212	Craddock Moor	23½	5
128	Creeg Braws	120	30
500	Cubert Mine	12½	—
1000	Cwm Erfin	3	2½ 3½
300	D.Prior& Buckfastleigh	—	—
7100	Derwent	8½	5
845	Devon&CourtenayCon.	7½	¾
1024	Devon Great Consols	1	200 205 10
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	5½	4 5
10000	Durham County Coal	45	9
3000	Dyngwm	10	12½
512	East Alvenney	5½	6 6½
2500	East Birch Tor	3	2½
112	East Caradon	47	47
2048	East Crowndale	6½	4
512	East Combe Silver-Lead	6½	6½
128	East Pool	15	75 80
9000	East Tamar Consols	¾	½ ¾
94	East Wheal Crofty	125	65 70
1024	East Wheal Fortune	2	3
128	East Wheal Rose	50	600
—	East of Scotland Iron Co.	5	1½
123	East Wheal Seton	14	10
1280	Esgair Lli	1½	2½ 3
248	Exmoor Wh. Eliza	6	6
494	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3½
6400	Gadair	2	2
4000	Gen. Mining Co. for Irel.	1½	1½
256	Gonamena	44½	16
128	Goonvrea	4	2
256	Grambler & St. Aubyn	80	12 15
100	Great Consols	1000	190 200
512	Gt.Wh.Rough Tor Con.	18½	20 22
2000	Growa Slate Company	5	5
256	Gwinear Consols	7	1
6000	Helgaston Down Con.	1½	1½ 1¾
256	Herodsfoot	27	15 17
10000	Hibernian	12½	1½
239	Hobb's Hill	6	1½
1000	Holmbush	22	5
1024	Kingsett and Bedford	½	3½ 4
827	Kirkcudbrightshire	8½	3 4
2048	Lamherooe Wh. Maria	13	2
252	Lanarth Consols	—	4
128	Lelant Consols	90	40
160	Levant	—	180 200
1000	Lewis	16	10½
1000	Llwyn Malees	7½	7 8
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	19	14
6000	Marke Valley	10	¾ 1
25000	Mendip Hills	3	¾ 1½
128	Metha	34	140
20000	Mining Co. of Ireland	7	4
1280	Nantyeris	4	4
256	New East Crowndale	3½	2½
100	North Pool	45	621
140	North Roskear	5½	150
262	North Wh. Leisure	1½	2
256	North Wheal Basset	10	10 12
15000	Northern Coal Co.	23	2
128	Par Consols	55¾	800
8000	Pennant & Craigwen	2	½
1024	Penzance Consols	18s 3d.	3
512	Plymouth Wh. Yeoland	6½	6
200	Polsaith Consols	5½	4½
2500	Rhoswiddol&Bacheldon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
2048	Runnaford Coombe Tin	¾	12
9000	South Tamar	¾	¾ 1
128	South Caradon	5	400
1100	South Dolcoath	4	5
	BRITISH MINES—continued.		
256	Sth. Friendsh. Wh. Ann	20	4
256	South Molton	5	15
256	South Tolgus	14	55 60
256	South Trelawny	28½	2 3
2000	South Wales Mining Co.	½	1 1½
128	South Wheal Basset	20½	290 95
124	South Wh. Frances	160	260
256	South Wh. Josiah	—	3
1000	South Wh. Maria	2½	1½
10000	Southern&Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	70 90
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	17 17½
9600	Tamar Consols	3	7 7½
1024	Tavy Consols	6	1½ 2
6000	Tincroft	7	11
1000	Tin Vale	2½	2¾
58	Tokenbury	170	10
256	Tregordan	2	4 6
256	Trehane	1½	25 26
5000	Treleigh Consols	6	2 2½
2000	Trenance	3	—
96	Tresavean	10	150
120	Trethellan	5	15 16
120	Treviskey and Barrier	130	88 93
268	Trevean	1½	5
100	United Mines	300	200
256	Wellington Mines	25	35 40
128	West Buller	10	317½
256	West Caradon	20	110 115
512	West Fowey Consols	40	12
256	West Providence	9	15
200	West Seton	40	225 230
—	West of Scotland Iron Co.	240	90
120	West Trethellan	5	16
256	West United Hills	—	4½
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	¾ 1½
256	West Wheal Tolgus	80	14 15
256	West Wheal Treasury	19	4¼ 5½ 8
1024	Whiddon Mines	4½	2
5200	Wicklow Copper	5	8¾
107	Wheal Adams	79	30
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
240	Wheal Anderton	25½	29½
128	Wheal Ann	—	50½
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	15
256	Wheal Benny	14½	2
256	Wheal Blencowe	21	10
256	Wheal Bucketts	20	8
232½	Wheal Calstock	9	15
1024	Wheal Coad	1	4
268	Wheal Courtenay	12½	—
256	Wheal Fortescue	6½	—
388	Wheal Franco	27	13½
128	Wheal Harriet	45	1
100	Wheal Henry	—	20 5
112	Wheal Margaret	79	200
512	Wheal Mary Ann	5	16 17
208	Wheal Mary Consols	60½	8
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	3
198	Wheal Seton	214	275
180	Wheal Sisters	35½	5
494	Wheal Sophia	4½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	7	10
260	Wheal Trelawny	7½	75 80
256	Wh.Tremaine(St.Ervan)	9½	2½
1024	Wheal Tremayne	9½	4 5
92	Wheal Tryphena	140	265
1000	Wheal Vincent	2	7
256	Wheal Vlow (Perranz.)	½	¾
184	Wheal Vyvyan	—	60
250	Wheal Williams	28¾	8
1024	William & Mary Worth	2	2½
	FOREIGN MINES.		
5000	Alten Mining Company	14½	2½
15000	Asturian Mining Co.	15	3½ ¾
20000	Australian	3	6½ ¾
10000	Anglo-Mexican Co.	100	¾
12374	Ditto Subscription	25	1½
6000	Barossa Range	1½	2 2½
3000	Bolanos	150	2 2½
2000	Ditto Scrip	[illegible]	2½ 2¾
10000	Brazilian Imperial	23	4
12000	Cobre Copper Co.	40	24
10000	Copiapo Mining Co.	14	4 4½
20000	General Mining Ass'n.	20	14
4000	Guadalcanal	5	10 12
5000	Kinzigthal Mining Ass.	2	2
5051	Mexican Company	59½	—
2000	Mexican & SouthAmer.	8	1 1½
5000	National Brazilian	30	3½ ¾
104000	N. Brit. Australasian	1	¾ ¾
7000	Royal Santiago	10	5½
11000	St. John del Rey	15	11½ ¾ 12
43174	United Mexican ...Av.	28½	3½ 3¾

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 27, 1849.

ENGLISH IRON. *a*				*per ton.*
Bar, bolt, & square, London	£5	12	6	
Nail rods	7	10	0	
Hoops	9	0	0	
Sheets (singles)	10	0	0	
Bars, at Cardiff & Newport	5	10	0	
Refined metal, Wales*	4	0	0	
Do. anthracite*	4	0	0	
Pig, No. 1, Wales, cold-blast	3	15	0	
Do. do. hot-blast	3	10	0	
Do., No. 1, Clyde ....*net cash*	2	6	0	
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	4	0	0	
Do., do., for tin-plates, boiler plates, &c., ditto	4	10	0	
Stirling's Patent Toughened Pigs, in Glasgow	3	3—3	6	
Stirling's Patent Toughened Pigs, in Wales	4	0—4	15	
Staffordshire bars, at the works	7	10		
Pigs, in Staffordshire	3	0—3	15	
Rails	5	10		
Chairs	4	0		
FOREIGN IRON. *b*				
Swedish	13	10	0	
CCND	17	0	0	
PSI	—			
Gourieff	—			
Archangel	12	10	0—13	
FOREIGN STEEL. *c*				
Swedish keg	14	10	0	
Ditto faggot	16	10	0	
ENGLISH COPPER. *d*				
Sheets, sheathing, & bolts, *p. lb.*	0	0	10	
Tough cake ....*per ton*	88	10	0	
Tile	87	10	0	
Old copper *e* ....*per lb.*		9*d*		
FOREIGN COPPER. *f*				
South American, in bond	£73—75			
ENGLISH LEAD. *g*				
Pig ....*per ton*	16	0	0	
Sheet	17	0	0	
Red lead	17	10	0	
White ditto	22	0	0	
Patent shot	19	15	0	
FOREIGN LEAD. *h*				
Spanish, in bond	15	10	0	
American ditto	—			
ENGLISH TIN. *i*				
Block ....*per cwt.*	4	9	0	
Bar	4	10	6	
Refined	4	16	0	
FOREIGN TIN *k*				
Banca, in bond	4	14	0	
Straits	4	12	0	
Peruvian (6 mo 2½ p. ct. dis.)	—			
TIN-PLATES. *l*				
IC Coke ....*per box*	1	9	0	
IC Charcoal	1	12	6	
IX ditto	1	18	6	
SPELTER. *m*				
Plates, warehoused ....*per ton*	16	5	0	
Ditto, to arrive	15	15	0	
ZINC. *n*				
English sheet ....*per ton*	22	0	0	
QUICKSILVER *o* ....*per lb.*	0	3	3	

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.; *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

REMARKS.—The transactions which have taken place in all descriptions of metals during the past week has been of a very limited character, and to supply only immediate wants.—Welsh bars must be again written lower. The scarcity of orders is beginning to be severely felt by the makers, who show every disposition to meet buyers. Some little business has been done by intermediate holders, at 5*l*. 7*s*. 6*d*. per ton, free on board at the port; our quotation is, therefore, nominal.—Scotch Pig-Iron: The unfavourable accounts received from America and the continent, have had a prejudicial effect upon this article, and the market continues in a very depressed state. Prices of ordinary brands have given way about 1*s*. per ton during the week, and Gartsherrie about 2*s*. 6*d*. We quote mixed Nos. 45*s*. 6*d*. Stocks are rapidly increasing, and with the present disposition on the part of the makers to sell, it is expected that much lower rates will rule.

GLASGOW, APRIL 26.—The demand for pig-iron continues small; consumers seem indisposed to make purchases beyond the necessities of the moment. The stock is still on the increase; that, together with the fall in value of the article in the United States, has had a tendency to keep down prices here. We quote the price to-day at 46*s*. to 46*s*. 6*d*. for mixed Nos.—cash.

LEAD ORES.

Ticketings at the King's Head Hotel, Holywell, April 26.

Mines.	Tons.	Amount.	Purchasers.
Pantymwyn	40	£10 0 0	Walker, Parker, & Co.
Pen-yr-henblas	57	10 5 6	Walker and Eyton.
ditto	50	10 6 0	Mather and Walker.
Westminster	55	9 9 0	Walker, Parker, & Co.
Jamaica	40	9 18 0	Newton Keates & Co.
Belgrave	30	10 0 0	Walker, Parker, & Co.
Deep Level	67	10 5 0	ditto
Catch	7	10 8 6	J. P. Eyton.
Milwr	50	11 8 0	Walker, Parker, & Co.
Douglas	90	10 12 0	Mather & Co.
Peel	75	10 9 0	Newton, Keates, & Co.
Conlig	80	9 16 6	Walker, Parker, & Co.
Total tons	641.		
Sold at the Mine.			
East Wheal Rose	44	£15 5 0	R. Michell & Son.
ditto	25	13 19 0	Sims & Co.
ditto	12	8 4 0	ditto
Sold at London.			
Wheal Adams	26	£9 11 0	Sims & Co.
Sold at Liskeard.			
Wheal Trelawny	105	£17 18 6	T. Somers.
Sold at Aberystwith.			
Goginan	40	£14 13 6	Newton, Keates, & Co.
ditto	75	14 10 6	ditto
Frongoch	90	10 0 0	Bristol Company.
Graigoch	44	9 9 6	Newton, Keates, & Co.
Cwmystwith	40	9 15 0	Bristol Company.
Total tons	289.		

BLACK TIN

Mine.	Tons.	Price.	Purchasers.
East Crowndale	10	£45 0 0	Calenick Co. and Williams.
Polberrow	19½	6 0 0	Daubuz and Enthoven.
ditto	6¾	44 2 6	Williams and Co.
ditto	3½	44 0 0	J. H. Enthoven & Co.
ditto	1½	37 0 0	Calenick Smelting Co.
West Wheal Jewel	3½	49 2 6	Bissoe Company.
ditto	3½	46 7 6	Calenick Smelting Co.
ditto	3½	46 17 6	ditto
ditto	3¾	47 7 6	ditto

COPPER ORES.

Sampled April 11, and Sold at Andrew's Hotel, Redruth, April 26, 1849.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	125	£2 14 6	South Caradon	63	£9 1 6
ditto	113	3 2 6	ditto	60	6 4 0
ditto	110	5 8 6	ditto	58	7 0 6
ditto	100	4 8 6	ditto	38	6 14 6
ditto	99	3 17 0	ditto	25	4 13 0
ditto	98	3 15 0	Wh. Henry	65	
ditto	93	4 3 6	ditto	57	Withdrawn, to be sold next week at Camborne.
ditto	89	4 0 6	ditto	53	
ditto	73	2 5 0	ditto	43	
ditto	69	4 4 6	ditto	22	
ditto	68	5 8 0	Tresavean	94	4 16 0
ditto	67	4 15 6	ditto	83	3 11 0
ditto	66	5 8 6	Treleigh Consols	55	13 15 0
ditto	61	2 9 6	ditto	47	4 9 0
ditto	52	3 13 6	ditto	13	2 13 0
Par Consols	102	4 7 0	Wh. Banns	43	4 17 0
ditto	97	6 1 6	ditto	30	1 8 6
ditto	89	8 2 6	West Wh. Jewel	70	4 2 0
ditto	88	7 19 6	West Trethellan	31	3 10 0
Wh. Comfort	94	1 18 6	Wh. Brewer	14	2 19 6
ditto	82	1 18 6	East Downs	9	4 17 6
ditto	52	4 17 0	North Downs	8	5 5 0
ditto	43	1 8 0			

TOTAL PRODUCE.

United Mines	1283	£5071 3 6	Wh. Banns	73	£251 6 0
Par Consols	376	2457 18 0	West Wh. Jewel	70	287 0 0
Wh. Comfort	271	651 4 0	West Trethellan	31	108 10 0
South Caradon	244	1722 19 6	Wh. Brewer	14	41 13 0
Wh. Henry	240	Withdrawn	East Downs	9	43 17 6
Tresavean	177	745 17 0	North Downs	8	42 0 0
Treleigh Consols	115	999 17 0			

Average Standard........£112 3 0 | Average Produce........ 6¾
Average Price per ton........£4 13 6
Quantity of Ore........2671 tons. | Quantity of Fine Copper, 176 tons 5 cwts.
Amount of Money........£12,423 5 6
LAST SALE.—Average Standard........£99 17 0.—Average Produce........ 9¾
Standard of corresponding sale last month, 107*l*. 5*s*.—Produce, 7½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	155	£740 17 6
Vivian and Sons	494	2241 6 9
Freeman and Co.	372	1777 12 6
P. Grenfell and Sons	441	1899 10 0
Sims, Willyams, and Co.	498	2156 4 6
Williams, Foster, and Co.	588	2942 2 0
Schneider and Co.	123	665 11 6
Total tons	2671	£12,423 5 6

Copper ores for sale on Thursday next, at Tyack's Hotel, Camborne.—Mines and Parcels.—North Roskear 962—North Pool 691—Consolidated Mines 512—Tincroft 353—Fowey Consols 297—Wheal Seton 262—South Wheal Basset 216—South Wheal Frances 169—Creeg Braws 150—South Roskear 133—Wheal Vyvyan 36—Wheal Union 8—Wheal Northy 2—Wheal Henry 240.—Total quantity to be sold, 4031 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea 786—Tywarnhayle 360—Par Consols 334—Levant 255—West Wheal Treasury 164—Wheal Tremayne 123—West Wheal Buller 115—Wheal Agar 102—South Crinnis 101—Great Work 95—Wheal Busy 54—Wheal Friendship 38—Alfred Consols 38—Wheal Venture 15—Carzise 4.—Total, 2584 tons.

COPPER ORES

Sampled April 4, and Sold at Swansea, April, 26, 1849.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Cobre	115	13¾	£10 18 0	Burra Burra	66	32½	£27 0 0
ditto	111	13¾	10 19 0	ditto	63	31¾	26 7 0
ditto	97	13¾	10 11 0	ditto	62	31¾	25 15 0
ditto	95	13¾	10 7 0	ditto	61	31	25 13 6
ditto	78	21¾	17 14 0	ditto	60	30½	25 12 6
ditto	75	20¾	16 15 0	ditto	35	31½	25 4 6
ditto	60	22	17 18 6	Berehaven	124	11¾	9 10 0
ditto	54	21	17 5 0	ditto	95	11¾	9 7 6
ditto	52	22½	17 3 6	Ballymurtagh	41	5½	3 18 6
ditto	31	23	18 14 6	ditto	39	5	3 10 0
ditto	74	21¾	17 15 0	ditto	6	7	5 9 6
ditto	62	23¾	18 12 6	Chili	45	27¾	22 14 6
ditto	61	23½	19 10 6	Aberdovey	18	10	8 5 6
ditto	59	20¾	17 2 6	ditto	6	4¾	3 5 6
ditto	55	20¾	16 11 6	Vine Slag	16	4½	2 14 0
ditto	51	23½	19 2 0	ditto	7	4½	2 15 0

TOTAL PRODUCE.

Cobre	1130	£17148 7 0	Chili	45	£1022 12 6
Burra Burra	347	9025 2 0	Aberdovey	24	168 12 0
Berehaven	219	2068 12 6	Vine Slag	23	62 9 0
Ballymurtagh	86	380 5 6			

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	144	£1974 19 3
Freeman and Co.	76	1805 14 3
Grenfell and Sons	231	3866 13 6
Sims, Willyams, and Co.	118	2685 2 0
Vivian and Sons	567	6768 7 0
Williams, Foster, and Co.	426	6777 7 0
Mines Royal	37	656 15 0
Schneider and Co.	275	5301 2 6
Total tons	1874	£29,836 0 6

Copper ores for sale May 10.—Cobre 96, ditto 91, ditto 86, ditto 74, ditto 64, ditto 59, ditto 56, ditto 110, ditto 105, ditto 92, ditto 53, ditto 46.—Berehaven 127, ditto 123, ditto 97, ditto 89.—Knockmahon 79, ditto 77.—Chili 48.—Ballymurtagh 29.—Burra Burra 24, ditto 1.—Total, 1626 tons.

MINING APPOINTMENTS FOR MAY.

2. Devon Consols sampling.
3. Ticketing at Tyack's Hotel, Camborne, North Roskear, North Pool, and other mines.
4. East Pool Mine pay and setting-day.
5. West Wheal Jewel ditto.—Vice-Warden's Court held at Truro.
7. South Frances account on the mine.
9. Consols and United Mines sampling.
10. Ticketing at Andrew's Hotel, Redruth, Carn Brea, and other mines.
12. Wheal Mary pay day.
14. Annual meeting—West Wheal Jewel.
16. Great Consols account at the mines—North Pool, East Crofty, and Seton sampling.
17. Ticketing at Pearce's Hotel, Truro—Devon Consols and other mines.
19. Wheal Seton pay day.
21. Treviskey and Barrier account.
22. East Wheal Crofty account at the mine.
23. Devon Consols account—Carn Brea sampling.
24. Ticketing at Pearce's Hotel, Truro—Consols, United, and other mines.
29. Tresavean account at the mine.
30. No sampling this week.
31. Ticketing at Tyack's Hotel, Camborne—North Pool, Wheal Seton, and other mines.

WHEAL FRANCO MINING COMPANY.

At a general meeting of adventurers in this undertaking, held on the 18th inst., the accounts were examined and passed, showing—Balance last account, 354*l.* 4s. 9d.; ores sold, Sept., 498*l.* 11s.; Oct., 445*l.* 19s.; November, 329*l.* 11s.; Dec., 294*l.* 13s. 10d.; Jan., 354*l.* 13s. 8d.=2277*l.* 13s. 3d.—By labour cost and materials, Sept., 348*l.* 3s. 11d.; Oct., 477*l.* 18s. 2d.; Nov., 317*l.* 0s. 11d.; Dec., 366*l.* 0s. 9d.; Jan., 393*l.* 4s. 4d.=1902*l.* 8s. 1d.: leaving balance in favour of the company, 375*l.* 5s. 2d., from which deduct above balance on last account, shows a profit on the five months of 21*l.* 0s. 5d. Captain Edwards having tendered his resignation, it was resolved that, whilst the company deeply regret his decision, they accept his resignation, with their best wishes for his success, and the offer of such testimonials as may be of service to him abroad; and that the committee immediately direct their attention to providing a successor, or successors, to Capts. Edwards and Lean. Mr. Algar having retired from the committee, Mr. Square was added to it. The following report from Capt. R. Edwards was read:—

April 18.—The 32 fm. level, east of Spry's shaft, has been driven 3 fms., the greater part of which was in ground disordered by the cross-courses, but it is now more settled. It is hard, but, although not rich, is producing a little ore. The 47 fm. level, east of the engine-shaft, has been driven 15 fms.; the first 7 fms. was through ore ground, but the last 8 fms. have been poor, and the end is at present poor; but the main part of the lode is standing to the south, a hole having been bored in that direction 6½ ft., 2 ft. of which is in hard caple, and the last 4½ feet in fluor-spar and ore. This has not apparently cut through the lode, and the latter part of the boring has produced good work. The lode in the 62 fathom level has been cut, and driven on eastward 6 fathoms. The lode in the first part of this has been large, and composed of fluor-spar, quartz, and stones of ore: but the end is now hard and poor. This level has been driven 2 fms. west; here the lode is seen 5 feet wide, with only one wall; it is composed of fluor-spar and good stones of ore, and presents a very promising character. I am sorry to say the quantity of ore ground laid open since the last meeting has not been equal to that taken away; and, without an improvement in the lower levels, this diminution of ore ground must continue; but I have great hopes that an improvement will take place, which will not only keep up the supply of ore ground, but lead to something important in favour of the mine. The lowness of the standard has been very seriously felt by the company since the last account; and, as we have the average of the previous month's public sale, we have not yet felt the benefit of the great improvement which has taken place. This will be found in the next two months, and I may, therefore, confidently promise you a profit of at least 300*l.* in that time.

BLAENAVON IRON AND COAL COMPANY.—A meeting of shareholders was held at the offices, yesterday, at which a favourable report was presented, and an interesting discussion ensued, of which we have a detailed report, but the insertion of it, however, is necessarily deferred until next week.

WEST WHEAL PROVIDENCE.—At a meeting of adventurers, held at the mine, on the 18th inst., the following statement of accounts was allowed, and a dividend of 2*l.* per share was declared:—By balance from last account, 41*l.* 6s. 4d.; ores sold (less dues), 1094*l.* 7s. 5d. = 1135*l.* 13s 9d.—To costs and merchants' bills for Dec., Jan., and Feb., 597*l.* 5s. 7d.; dividend of 2*l.* per share, 512*l.* = 1109*l.* 5s. 7d.: balance in favour of adventurers, 26*l.* 8s. 2d.

WHEAL TREMAYNE.—A meeting of adventurers was held yesterday week, when the following accounts were submitted and allowed, and Mr. Richard Thomas was appointed secretary instead of Mr. Henry Thomas, who has obtained a situation in Spain:—By ores sold in February, March, and April (less dues), 2625*l.* 5s. 10d.; West Wheal Providence water charge, 24*l.*; carriage of tin and debts, 19*l.* 10s.=2668*l.* 15s. 10d.—To balance from last account, 181*l.* 10s. 8d.; costs and merchants' bills for January and February, 2172*l.* 0s. 6d.=2353*l.* 11s. 2d.: leaving balance in favour of mine, 315*l.* 4s. 8d.

WHEAL WALTER.—A meeting of shareholders in this mine, convened by requisition to the honorary secretary, Mr. Crofts, was held at 4, King-street, on the 19th inst., when the purser Mr. Walter Weekes, being present, a full and complete investigation took place into his claims, and the accounts of the mine generally, which ended in a series of resolutions for the liquidation of all claims fairly due and owing by the mine, and a call of 10s. per share was made, payable in 28 days. A resolution was then taken, "That the solicitor of the company be instructed to enforce the payment of all calls in arrear, so far as the solvency of the parties will justify such proceeding."

COAL MINES.—In the House of Lords, last night, the Bishop of Durham presented a petition from Newcastle, praying for the introduction of some measure to force proprietors of coal mines to adopt more efficient measures to prevent explosions in coal mines.—The motion of Mr. Hume stood on the order book of the House of Commons for Thursday last, but the hon. gentleman postponed it during the evening.

MUESELER'S SAFETY-LAMP.—Having been applied to by more than one correspondent for a description of this safety-lamp for coal mines, and the subject of the prevention of explosions being, at the present moment, of such wide-spread interest, we will with pleasure endeavour to convey a tolerably correct idea of its construction, which, we think, may be perfectly well understood without a diagram. This lamp is is in general use in all the coal mines of Belgium, giving a superior light to a naked candle. The base of the lamp consists, as in the "Davy," of the oil cylinder, with its wickholder, trimmer, &c. This is surrounded to about half the height of the lamp by a cylinder of thick, well annealed glass, protected on the outside by upright bars of metal. Above this is the wire gauze casing, through which air enters, and the heated products of combustion escape. Within the body of the lamp, and immediately over the wick, at such a height as not to obstruct the light, is placed a conical cylinder of thin sheet-iron, reaching to within an inch of the top. This causes a rapid draught of atmospheric air to descend from the lower parts of the gauze, and play around the wick, giving, at the same time, egress for the heated products of combustion, which escape from the upper portion of the wire cylinder, by which means a steady and uniform light is obtained. We are indebted to a communication from Mr. G. Montefiore Levi, a mining engineer in Belgium, for some of these particulars; and also two well-executed pen-and-ink drawings of the lamp, in section and perspective view, which may be seen at our office. It is, however, but justice to state in this notice that the Mueseler's lamp is decidedly on the principle of Dr. Reid Clanny's last patent.

HIGH-PRESSURE STEAM.—It is stated that this mode of mine ventilation is also about being tried in one of the Swansea Coal Company's collieries.

THE BISHOP'S LEAD MINES IN WEARDALE.—When Bishop Barrington was promoted to the see of Durham, the agent for the Beaumont family waited upon him, as is usual under those circumstances, to agree for the sum to be paid in lieu of the ninth bin of the ore to which he was entitled under the lease for three lives on which the lead mine was held. The Bishop told the agent that he was ignorant of the value of the "lot ore," but was ready to agree to whatever price he said it was worth. The agent estimated the value at 800*l.* a-year, which was about the sum paid to the former Bishop; but he afterwards valued it at 900*l.*, which sum was agreed upon as the rent to be paid during the Bishop's incumbency. It, however, turned out that the "lot ore" was worth 4000*l.* a-year; and the Bishop having been advised by his friend, Sir Samuel Romilly, to file a bill in Chancery, he obtained a decree for a rent of 4000*l.* a-year, and for all the arrears (70,000*l.*) He laid out about 10,000*l.* of the arrears in building and endowing a school at Bishop Auckland. Other portions of the money were applied to increasing the living at St. Andrew's Auckland (which was very small), and to various charitable purposes. The rent for the mine continued at 4000*l.* a-year during the late Bishop's incumbency, but it is now increased 3750*l.*; and the rector receives 3750*l.* for his tenth bin.—*Church Leases* (Ridgway, London, 1839).

COAL TAR.—Mr. R. A. Smith, of Manchester, has obtained a patent for some improvements in the application and preparation of coal tar, which are described by the *Mechanics' Magazine* to consist in the preparation and application of coal tar to coating the interior surfaces of water pipes. The coal tar is first reduced by distillation or otherwise, to a thick pitch-like mass, and placed in an open vessel, of sufficient depth to contain the pipes to be operated on, where it is heated to 300° Fahr., or to a temperature at which the coal tar becomes fluid. The interior surfaces of the iron pipes are freed from oxide, and covered with linseed oil, to facilitate the adhesion of the coal tar, in which they are immersed for about an hour, after having been previously heated to 300° Fr. When the pipes are liftted out, linseed oil is poured into them, which removes any excess of coal tar, and serves, at the same time, to keep the contents of the vessel fluid. Or the pipes may be placed cold, after being cleansed from the oxide in the melted coal tar, and kept there until they are of the same temperature, which the patentee states he has generally found to take an hour and a half. *Claim.*—Coating the interior of water pipes with coal tar by aid of heat.

A notice appears in the *Daily News* of yesterday, that Evan Evans, a miner, who left Liverpool for Cork, on the 5th Sept. last, in company with Henry Jones, can hear of something to his advantage on application to John Bill, Mold, North Wales.

Cumaron Copper-Works.—D. Llewellyn was killed by a fall of a large piece of rock from the roof of the colliery.

Cumbran Colliery.—G. Benjamin was killed by a stone falling on him from the top.

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£23½ 23½
20,000	British North American	50	6	4½
20,000	Colonial	25	5	6¾
—	Commercial of London	20	6	20½
4,000	Ionian State	25	6	24½ 25
20,000	London Joint-Stock	10	6	14½
20,000	London and Westminster	20	6	24
10,000	National Provincial of England	35	5	35
20,000	National of Ireland	22½	5	16½
20,000	Provincial of Ireland	25	6	28½
4,000	Ditto New	10	6	15
—	South Australia	22½	—	24 23½
20,000	Union of Australia	25	6	24½
10,000	Ditto New	2½	6	—
60,000	Union of London	16	6	10½ 10¾

INDURATED AND IMPERVIOUS STONE WORKS.—We have on former occasions called public attention to Messrs. Hutchison's patent for indurating sandstone, and rendering a variety of other materials, naturally of a soft and unindurable nature, hard and indestructible. Like all other inventions and discoveries of novelty and utility, the patentees have, during the past 12 months, had an immense deal of uphill work to contend with. Individual interest, deep rooted prejudice in favour of some particular kinds of material, or the backwardness always evinced in adopting new, although improved, processes of manufacture, have alike prevented that general introduction of these highly-important and elegant substitutes for the common building materials, which parties engaged in the several branches of building, architecture, and decoration, would find greatly increase their own profits, while the public would be generally benefitted. Perseverance will, however, conquer all difficulties, and we are happy to find that, with the advance of the present year, and the gradual improvement which has taken place in most trading interests, the patentees have found an increasing demand for their material, and it is highly encouraging to know that, where they have once constructed any description of works, they have given the greatest satisfaction, and secured an earnest of future favours. By this process, stone, chalk, plaster of Paris, alabaster, bricks, sand, wood, paper, and all absorbent materials, are made impervious and compact, resisting all weather, vermin, and other destructive agents. Works are also executen by them in paving, kerbing, macadamizing, pitching, gutters, drains, sewers, &c., and all description of building, hydraulic, decorative, and monumental constructions, cheaper and more durable than any other stone. All these indurated materials take a polish equal to the richest marble at one third the cost. A notice appears in our advertising columns for agents in all large towns; to whom, with business habits, and the employment of a small capital, we cannot doubt but it will prove a highly lucrative employment.

ELECTRIC LIGHT.—The new ballet at her Majesty's Theatre has been identified with the electric light. The critiques of our daily contemporaries have made the public familiar with the subject of the piece. It may be interesting to the scientific portion of our readers to be furnished with some of the details behind the scenes, and we are in a position so far to oblige them. The battery is placed on the roof, constantly attended by two or three men; and, it will be hardly credited, that after all the expense of the numerous patents, for perfluent, percolating, syphon, and other batteries, the high compliment is paid to the Rev. Dr. Callan, the suggestor of the Maynooth battery, of giving that battery the preference. There are about 75 cells of the largest size; about 400 yards of (say of No. 14) copper wire, msulated, are used as the conductors to the machine for regulating the carbon points. The lamp, or machine, appears to be the same, or of the same construction, as that heretofore used at Trafalgar-square. It is set in operation some time before the light is required, so as to preclude any delay in exhibiting it to the audience, and kept covered till called into requisition by the appropriate incident of the piece. It stands before an immense parabolic reflector, and throws a most intense glare of light on the principle *dansense*. The duration may be from 3 to 5 minutes. After the ballet, we understand a private display took place, the curtain was raised, and the house flooded with the electric rays, totally obscuring all other lights. Mr. Staite is the patentee selected by Mr. Lumley's patronage. The actual expense of this short exhibition, without including any profit to the patentee, is, we are told, 2*l.* per night; *no doubt*, the chemical *products* compensate for this outlay—otherwise, *le jeu ne vaut par la chandelle*. We fear the economists will say, if five minutes cost 2*l.*, one hour will cost 24*l.* The cost for such a purpose is not the consideration at present. A worse feature, however, is that Mr. Staite apparently abandons his patented batteries. We have been also informed, that the directors of the Hungerford Suspension Bridge have placed at Mr. Staite's disposal one of the towers, where his light is to be very soon exhibited—a very appropriate place, we should say, if we may be excused the pun—as we have been kept so long in *suspense* as to its reappearance.

PUBLIC WORKS.—A mass of accounts, laid before Parliament, on the motion of Mr. Parker, M.P., show that the sums advanced to borrowers by the Commissioners of Public Works, from the year 1817 up to the 1st January last, amount to 7,635,010*l.*; the interest paid, to 2,150,997*l.*; the principal repaid, to 5,356,053*l.*; and the balance of principal unpaid, to 2,278,956*l.* The amount advanced (7,635,010*l.*) is thus divided—viz.. 1,470,600*l.* for canals, rivers, and drainage; 554,110*l.* for docks and harbours; 285,500*l.* for bridges and ferries; 57,000*l.* for water-works; 250,500*l.* for the Thames Tunnel; 33,700*l.* for fisheries; 657,270*l.* for roads.; 490,600*l.* for railways; 666,800*l.* for the improvement of cities and towns; 80,750*l.* for compensation for damage during riots; 303,700*l.* for collieries and mines; 176,700*l.* for churches and chapels; 2700*l.* for relief of parishes; 108,000*l.* for colleges; 496,640*l.* for law courts, gaols, lunatic asylums, &c.; 1,970,900*l.* for the building and enlarging workhouses; and 15,550*l.* for emigration. The amount of principal and interest received by the hon. commissioners, on account of loans advanced, and returned to her Majesty's Exchequer, to the 5th January, 1849, was 7,507,051*l.*

SALES OF ASSURANCE OFFICE POLICIES.—Among the public sales of various properties at the Auction Mart during the week, Messrs. Musgrove & Gadsden sold the following policies of assurance. Two annuities, together 150*l.* per annum, less legacy duty, during the life of a gentleman aged 57, and a policy of insurance for 1600*l.*, with 183*l.* 18s. 3d. accumulations, and annual pm. 45*l.* 12s., sold for 1715*l.* An annuity of 100*l.* per annum during the life of a lady aged 68, with arrears of 222*l.*, policy for 1050*l.*, and 188*l.* accumulations, annual premium 30*l.* 16s. 7d.—800*l.* An annuity of 60*l.* in the Pelican Company, on the life of a lady aged 59, and a policy in the Economic for 650*l.*, with 90*l.* accumulations, annual premium 15*l.* 15s. 4d.—500*l.* A policy of assurance for 1400*l.*, on the life of a gentleman aged 64, annual premium 50*l.* 3s. 4d., paid to Christmas next, with bonusses 315*l.* 7s.—580*l.* Thirty 120*l.* shares in the Asylum Assurance Society, 30*l.* paid, no further calls expected, dividend 5*l.*, bonusses 2*l.*, sold for 50*l.* to 52*l.* per share.

EVADING DUTIES ON TRANSFER OF SHARES.—The Inland Revenue Commissioners having been informed of the existence of a practice of omitting the full amount of the purchase money in the transfer of railway and other shares, whereby the revenue is much injured, have issued a notice, in which they state that the penalties of the law on the subject will be strictly put in force in future against all offenders, and offer liberal rewards to all who shall give information of the commission of such frauds. The penalties for not truly stating the amount of consideration money in the deed of transfer are, on both purchaser and seller, 50*l.*, and five times the amount of duty evaded by the omission; the person employed in preparing the transfer incurs a penalty of 500*l.*, and if he be a solicitor, attorney, or writer to the signet, he is, on conviction, thenceforth disabled from practising. Either of the parties giving information of the transaction is to be indemnified and discharged from his liability to the penalty, and may be rewarded by the commissioners to one-half the amount recovered from the other party; the purchaser may also recover back by an action at law so much of the purchase money as is not set forth in the transfer, or the whole, if no part is set forth.

PATENT KAMPTULICON COMPANY.—In the Court of Common Pleas, on Saturday, Mr. Willes moved for a rule, in the case of Greville *v.* Walter, to show cause why proceedings shall not be stayed until the plaintiff had proved his right to proceed under the provisions of the Winding-up Act. Judgment had been obtained against the defendant as a member of the Kamptulicon Company, and a writ had been issued, under which certain goods had been taken in execution, which were alleged to be the property of the company. In February last an official manager was appointed under the Act referred to, and it was under the 73d section of the Act that the application was made The object of the statute was to compel every creditor to come in before the Master to prove his debt, in order that the Master might know what the sum was which was owing by the company, to enable him to regulate the calls upon the members, so as to discharge the liabilities of the company; also to prevent the injustice of suits by one member of a company, against whom a judgment had been obtained, against his co-members for contribution.—The Court said, as this was a novel application under a new statute, it would be well to consider it.—Rule *nisi* granted.

DIRECT LONDON AND MANCHESTER RAILWAY COMPANY.—The Lord Chancellor having last week decided that this company came within the operations of the Winding-up Act, and which decision reversed an order of Vice-Chancellor Knight Bruce, who declared it was not, was applied to on Wednesday last by Mr. J. H. Palmer, to fix the date of the winding up, as there was a doubt whether it should commence on the day on which the petition was presented, or from the date of his lordship's order. The Lord Chancellor was of opinion that the winding up should date from the day in which he made his order. Yesterday Mr. Daniel asked for the suspension of all proceedings until the company had obtained the decision of the House of Lords in an appeal intended to be entered against this judgment, when the Lord Chancellor refused, observing, with warmth, that he might just as reasonably be requested to repeal the Act of Parliament.

A "PROVISIONAL DIRECTOR" IN TROUBLE.—In the Insolvent Debtor's Court, yesterday, John Alexander, who was described as a "provisional director," applied to be discharged. It was elicited from him that he was a cheesemonger in Norfolk, and came to London when bubble companies were in vogue. He was recommended to the "Madras and Harcourt Railway," and became a "provisional director." The insolvent was also a director of the "Australian Railway and Sydney Dock Company" with the two persons mentioned. He had paid 50*l.* on account of the companies, and got nothing in return. He owed for inkstands, newspapers, and office fixtures. The insolvent said the parties belonging to the companies were a "bad lot."—Mr. Commissioner Phillips told him he was a good authority, and he was a pretty sample of the lot. (A laugh.) He remanded the insolvent for six months from the vesting order. The time had expired; but the public should know the opinion of the court with respect to this "provisional director," who was described in the prospectus as an "Esquire."

CALIFORNIA.—Although we have received, through the United States' papers, some little apparently authentic information of the quantities of gold already received from California, the accounts are by no means of that clear and tangible character as to the numbers employed, the state of society, &c., which we might have expected after a lapse of so many months. A Valparaiso date of Jan. 29 says—"The California excitement still continues, and the news from that country is as marvellous as ever. Remittances of gold continue to come forward in sums of $ 50,000 to $ 100,000, and besides the 21 expeditions already gone from this place since September, there are at this moment 13 vessels on the berth, taking provisions, wines, brandies, manufactured goods, gold and silver coin, and passengers of all classes. We understand there are a number of whale ships at the Sandwich Islands, unable to move, owing to their crews having deserted for California." The quantity of gold received in the United States is variously stated; that which appears the most legitimate statement makes it about $ 220,000 to the end of March. $ 32,000 worth were received in Boston, among which were native lumps, one of which weighed nearly 5 ozs. From the general accounts, it appears that the gold finders have had rather severe weather to contend against during the past winter; it is probable that the miners are at work, although it would take a good deal of sunshine and warm weather to thraw the great body of snow which had fallen in that region, so as to allow them to dig. Nothing is said about the probable yield of the mines, or the number of men at work at the *placers*; but this is accounted for by the fact that but a few numbers of the new newspaper, the *Alta California*, have been received, and the subject was perhaps too common there to be mentioned particularly, although it may have been treated at length in other copies of the same paper, which have not been received; but the spring freshets from the immense body of snow on the placers in January will wash out the gold in great quantities. The *Sydney Shipping List* says:—"The very extraordinary accounts from California of its great riches alone occupy the attention of every one, and in consequence little is thought of business generally. The great amount of goods purchased have been for the above destination, where speculators, it is anticipated will secure a rich harvest. It is to be hoped that we shall find there an outlet for a considerable portion of our surplus provisions, which are procurable here at very low rates, to the entire exclusion of those imported."

CHAGRES, MARCH 25.—In the scramble of the Californian movement, I have just time, in a canoe, to forward you a few lines. The *Crescent City*, from New York, arrived here yesterday, with 300 emigrants for California, bringing news from New York to the 16th inst., and from England *vid* New York, to the 25th February. There are now on the Isthmus, say about 1400 passengers, and no conveyance from Panama. The *California* steamer, due at Panama, from San Francisco, on the 13th inst., has not yet arrived from her first trip on that route—supposed all her crew have deserted for the gold region. The agent here, at Chagres, for Mr. Lawa's line of steamers from New York, has established a depôt at Porto Bello for coals for the steamers. The engineers are surveying the old road from that port to Panama, which, in my opinion, having some knowledge of the Isthmus, should be the road; the expense would be but trifling in comparison to route either by Nicaragua, or Tehuantepec, and those who advocated the two latter are looking to private interest instead of the general benefit. I arrived here this morning by the royal mail steamer *Medway*; the passengers for the southern Pacific ports will find difficulty in getting forward to join the steamer on that side. Canoes of a moderate size to Gorgona, $70 to $80; a small canoe, $30 to $40. It is amusing to look on quietly. American emigrants opening their trunks on the beach, and disposing of various articles at low prices, finding themselves short of cash, to get forward. Some have been over to Panama, and finding no mode of conveyance, are returning to the States by the *Crescent City* steamer; in fact, two-thirds of them appear quite adrift, and had not the slightest idea of the journey. The isthmus is quite healthy—a few cases of dysentery and fever, which must be expected. I start immediately for Gorgona, paying $70 for a canoe. There are two wrecks in Chagres Bay. From what I have already gathered, the California accounts are exaggerated, but by next steamer I shall be able to give you a more lengthy account. The information, as it is, you may depend upon.—*Morning Chronicle* of this morning.

MORE GOLD.—The American papers, not content with California, have discovered a newer and richer El Dorado nearer home. The glowing descriptions published of this far exceed any even from California. This new region of riches is said to exist in Catwaba county, in the province of Carolina; the gold there is found in larger quantities than on the banks of the Sacramento. One lucky individual, rejoicing in the name of Johnson, collected in an hour a bushel of gold dust, which on washing produced 1980 dwts. of pure gold!

REDUCTION OF DUTIES ON METALS IN SPAIN.—The duties, which have for a very long period existed in Spain on the importation of foreign metals and machinery, and which from their heavy amount have almost acted as a prohibition, have been thoroughly revised, and the new tariff is expected to be immediately issued by the Government. It is generally believed that such a reduction will be made as will greatly increase the commercial intercourse between this country and Spain. The difficulty of obtaining machinery, except at exorbitant prices, has tended greatly to obstruct the development of the mineral wealth of the country; but the Government, by this reduction of duties, will evince a wise desire for the interest of mining adventure and railway enterprise. The movement has already induced some wealthy French and Spanish capitalists to undertake the completion of the railway from Barcelona by Valencia to Madrid, which will create a large demand for rails, locomotives, and machinery. This reduction of duties on foreign produce will tend greatly to the increase of wealth and happiness in the country, and most probably place her, in a commercial view, in a highly respectable position among European nations.

At Adelaide, South Australia, a project for the disposal of town and country lots by lottery, on the principle adopted by the Bank of Australia at Sydney, to the amount of 25,000*l.*, in 5*l.* shares, had been started, and was expected to meet with immediate success. The first 1000 sheep of the present year had been boiled down at the establishment at Adelaide, and the result was a net produce of 26½ lbs. of tallow per sheep. Mutton hams had been cured for exportation. At Port Lincoln a quarry of pure white marble had been discovered, as also copal, and the singular mineral asbestos. At Portland plumbago is said to have been discovered also.

ARTIFICIAL LIGHT.—The following is an estimate of the sum expended annually in England and Wales for artificial light:—Gas consumed in London 546,000*l.*; in cities and country towns, 5,400,000*l.*; oil in lamps, 1,350,000*l.*; tallow and stearine candle, 210,000*l.*; camphine and other lamps, 80,000*l.*—total, 11,336,000*l.* This shows the prime cost only of the several materials, and not the price paid by consumers.

THE NEW CITY GAS COMPANY.—The Great Central Gas Consumers' Company's bill, with additional provisions for the construction of works without the limits of the City, was yesterday submitted to the Standing Orders Committee. Mr. Bryden and Mr. W. D. Wire appeared for the promoters, and Mr. Tyrall and Mr. Hall for the City Gas and the Chartered Companies, who opposed the scheme. The committee, after some deliberation, decided that the standing orders, so far as related to the additional provisions sought for, *had not been complied with*.

WEST CORNWALL RAILWAY.—Some of the directors of this company have been on the line, and have also been in communication with the landowners of the district. We understand that the results of their inquiries and communications are satisfactory, and that arrangements are in progress for the removal of the difficulties which have hitherto impeded the commencement of the works.—*Cornwall Gazette.*

ELECTRIC TELEGRAPHING IN ENGLAND ADVERTISED TO BE INSTANTANEOUS, ACCURATE, AND CHEAP.—Several Liverpool merchants on 'Change called our attention to a letter in the *Times* of yesterday from Mr. J. L. Richardo chairman of the Electric Telegraph Company, upon which we would at present merely remark that it is not surprising that the electric telegraph is but little used in England, when the company demanded, on the 26th inst, 19s. 1 fo transmitting from London to Liverpool the following short message;—

Lll. Hl. Db. Sixty-eight half Nine-fourth.
E. Avax. O. G. S. T. Three-ten.

Only 48 letters; and at this exorbitant rate they say they do not guarantee the correct transmission of a message unless paid for as a "repeated message," so that under that infliction the public would have been mulcted of 21s. for sending 48 letters. See how the thing is done in America:—We lately sent a message, of greater length, from New York to New Orleans and back, about 4000 miles, for 8s., and it was accomplished in 70 minutes. Here is another fact:—We had, on the same day, a message, containing more than 48 letters, sent from Philadelphia to New York. On its delivery we paid 1s. for its transmission, and 1d. for delivery. In these two American messages there was not a single mistake!!! In those which we send daily in England constant mistakes are made, by which the message is rendered useless. We ask to have the errors corrected; they say—Yes; pay us half the sum already paid, and we will correct our own blunders. Make a similar request to the railway companies here, relative to the non-delivery of a parcel, and you get an immediate remedy, with a polite apology for the error they had committed. As this is a subject of great public interest we will prepare and publish a full statement of our business with this company for the 117 days of this year; and there exhibit, in a tabular form, the number of messages, number of letters contained in each, cost of each, errors in transmission, time taken in the transmission of each, and all other particulars of interest to the public, with extracts from their Act of Parliament.—From the *European Times*.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Chester Main 15—East Adair's Main 13—Hasting's Hartley 14 6 to 15—New Tanfield 13—Original Tanfield 12—Ravensworth's West Hartley 14—Wall's End Gosforth 16—Hebburn 15 9—Heaton 16—Hedley 16—Percy Benaham 18—Walker 16—Lambton Primrose 17 6—Braddyll's Hetton 18 6—Morrison 15 9—Kelloe 18—Bishop's Tees 17 3—Parson's Graigola 21.—Ships at market, 57; sold, 29.

WEDNESDAY.—Bate's West Hartley 14—Buddle's West Hartley 14 6—Carr's Hartle 14 6—East Adairs Main 12 6—Holywell Main 14 6—Newcastle Hartley 18—North Percy Hartley 14—Ord's Redheugh 12 6—West Hartley 14 6—Wall's End Percy Benaham 18—Riddell's 16—Braddyll's Hetton 19—Cassop 17 6—Heugh Hall 16 9—Thornley 17—Hartley 14.—Ships at market, 37; sold, 27.

FRIDAY.—Carr's Hartley 14 6—Adair's Main 13—Hastings' Hartley 14 6—Holywell Main 14 6—New Tanfield 12 9—Newcastle Hartley 13—Ord's Redheugh 13 6—West Hartley 14 6—Hartley 14.—Ships at market 14; sold 11.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 194 2¾	Belgian, 4½ per Cent., 84 83¾
3 per Cent. Reduced Ann., 90¾ ¾	Dutch, 2½ per Cent., 50½ ¾
3 per Cent. Consols Ann., 93 ½ 2	Brazilian, 5 per Cent., 79¾
3¼ per Cent. Ann., 91½ ¾	Chilian, 6 per Cent., 92 1
Long Annuities, 8½	Mexican 5 per Cent., 32 1¾ ½
India Stock, 10½ per Cent., 246	Russian, 5 per Cent., 105½ 4½
3 per Cent. Consols for Acc. 92¾ 2 ½	Spanish, 5 per Cent, 17¾ 16¾
Excheq.Bills, 1000*l*. 2d. & 1½d. 47 44 47 pm.	Ditto 3 per Cent., 32½ ¾

MINES.—Since our last a favourable change has taken place, and considerable business has been transacted in the mining share market. For our leading and dividend-paying mines there is a constant inquiry, but sellers appear to be holding out for advanced prices. From our local correspondents we learn that several improvements have taken place during the week, and that the mines in the great mining districts are generally looking well.

In Devon Great Consols there has been several transactions during the week, and the bargains effected have been rather under last weeks quotations, although the mines generally have improved considerably during the week; some important discoveries have been made, and the bottom levels in Wheal Anna Maria are also improving.

Buyers continue to appear for South Frances, South Basset, West Buller, Carn Brea, Trelawny, West Caradon, and several others of the favourite mines.

In Kirkcudbright shares there has been some business, from the manifest improvements which have taken place recently.

A correspondent writes us that "at the Cairnsmore mine they have, during the last week, cut into a very rich course of ore in the 50 fm. level east, and they have recently met with the same mineral as accompanied the great deposit in Black Craig Mine." The recent discovery in the 50 fm. level, in Cairnsmore, is extremely interesting, it being the deepest level in this extraordinary mineral district, and must prove a great incentive to capitalists working the several veins in the neighbourhood. A cargo of silver-lead was shipped from Black Craig within the past week, which it is expected will be followed by regular periodical shipments.

At Herodsfoot a great improvement has taken place in the bottom, or 106 fm. level, where the lode is now very large, and moderately rich throughout. The agents calculate in continuing to sample 100 tons per month.

Grambler and St. Aubyn have improved; in the adit level of the former mine a lode was cut a short time since, worth about 12*l.* per fathom, and still continues productive.

Tamar Consols and Tincrofts have been in demand throughout the week, at a corresponding advance, in anticipation of an approaching dividend.

During the week shares in the following mines have changed hands:—Devon Great Consols, South Wheal Basset, Treleigh, Mary Ann, Camborne Consols, Trelawny, Kirkcudbright, Trehane, Condurrow, Mendip Hills, Tamar Consols, Treviskey and Barrier, East Pool, Tincroft, Ashburton United, Esgair Lle, Cwm Erfin, South Tolgus, Bedford United, East and South Tamar, Great Rough Tor Consols, &c., &c.

The accounts presented at the Wheal Franco meeting showed a balance in favour of the company of 375*l.* 5s. 2d., although the profits of the last five months amount only to 21*l.*; but an expenditure of nearly 100*l.* has been made during that period for necessary machinery, which will not be required again, a full explanation being given in the committee's report. The captain's report clearly presents a general improvement, with more cheerful prospects than they have had for some months, and also anticipated a profit of at least 300*l.* for the next two months, consequently the mine will be in a position to pay a dividend at the next audit.

At the West Wheal Providence meeting the accounts showed a balance of 538*l.* 8s. 2d. A dividend of 2*l.* per share was made, leaving a balance in hand of 26*l.* 8s. 2d.

At the meeting of the Tremayne adventurers the accounts were audited, showing a balance in favour of the mine of 315*l.* 4s. 8d.

Dispatches have been received by the Bolanos Mining Company, and the United Mexican. The Bolanos letters are to the 5th March, and represent the progress making in the erection of necessary machinery connected with the engine. Some little improvements have been made in the underground operations, but which are retarded by increase of water, and now wait the completion of the engine before any important discoveries can be effected; at the same time, considerable improvements are anticipated, from the general opinion that they are approximating a "bonanza," strengthened by the appearance of some rich stones of silver ore which have already been discovered in the lode laid down in the plan No. 3; consequently, the next accounts are looked forward to with some degree of interest.

The United Mexican letters are to the 8th of March, and states that the cheering prospects conveyed in the former advices have disappeared for the time. The agent's report represents recent improvement in the Santa Cecilia Mine, being accompanied with more frequent traces of ore. In the end of San Vicente a favourable change has taken place, but the general appearances are not so encouraging as the last account. The next remittance will leave in May, but the amount cannot be now advised.

In foreign mines there has been an active inquiry, especially for St. John del Rey and Australian shares, and several bargains done at advanced prices. There has also been inquiries for North British Australasians at former quotations, but none are obtainable at such prices. Some shares in Guadalcanal have changed hands under our present quotations, but sellers generally are looking for better prices. United Mexican, Bolanos, Cobre, and Copiapo, have also been done.

The following arrivals of specie have taken place since our last:—The Peninsular and Oriental Steam Company's ship, *Indus*, arrived at Southampton on Monday, having on freight 67 packages of specie, value 69,848*l.* sterling. The Royal Mail steam-ship, *Great Western*, arrived at Southampton on Tuesday with the West Indian and Mexican mails, bringing on freight $ 390,000, none of which are for account of Mexican bond holders. The Peninsular and Oriental steam-ship, *Jupiter*, arrived at Southampton on Tuesday night, having on freight 15 packages of specie and general cargo.

HULL, THURSDAY.—We have to report a continued depreciation in the share market, although the amount of business has rather increased. The Eastern Counties report will be in the shareholders' hands to-morrow, we expect. A meeting of North British shareholders, held here to-day, will probably decide upon some steps as to a committee of investigation.

RAILWAY TRAFFIC RETURNS.

Names of Railways.	Lgth. Rway.	Present actual cost.	Price per share	Div. 1848	Traffic Returns 1849	1848
Belfast and Ballymena	37¾	——	21	5 p. c.	£ 558	—
Birkenhead, Lancashire, & Chesh.	19	1,088,804	37	5 p. c.*	791	635
Bolton, Blackburn, & West Yorksh.	14	786,384	7½	—	402	—
Caledonian	141	4,865,135	27½ 6¾	—	5024	3555
Chester and Holyhead	84	3,014,602	17½	4	1361	—
Dublin and Drogheda	35½	774,875	33	—	854	716
Dublin and Kingstown	7½	395,915	—	—	642	704
Dundee, Perth, & Aberdeen Junc.	47½	544,554	24½	8	1014	850
East Anglian (Lynn to Ely)	67½	1,167,104	3½	—	704	447
East Lancashire	50	2,628,519	16¾	5	2784	965
Eastern Counties and Norfolk	309¾	12,027,069	8 7½	4	15066	15203
Eastern Union	50½	1,712,703	13	—	1115	1032
Edinburgh and Glasgow	57½	2,644,378	42	6	3632	3072
Edinburgh and Northern	78	2,232,115	12½	4*	1892	1223
Glasgow, Paisley, and Ayr	102½	2,286,353	57	4	2600	2026
Glasgow, Paisley, & Greenock	23	848,328	13¾	4	984	951
Gt. Northern & East Lincolnshire	110	4,255,171	11 10¾	5*	2214	—
Gt. Southern & Western, Ireland	131	2,844,897	34	4*	4090	2110
Great Western	305¾	11,608,815	90	7	21287	18701
Kendal and Windermere	10½	174,600	25¾	—	139	124
Lancaster and Carlisle	70	1,476,102	51¾	4	2146	1602
Lancashire and Yorkshire	206½	9,218,450	72	6	11278	9176
London and North Western	435	25,077,942	131 28	7	40303	37410
London and Blackwall	4	1,299,675	5¾	1-12	605	720
London, Brighton, & South Coast	162½	6,382,281	39 8½	2½	9331	7006
London and South-Western	216½	7,510,689	36 5	6	8996	7572
Londonderry and Enniskillen	14½	171,026	16	—	136	154
Manchester, Sheffield, & Lincolnsh.	91½	6,048,679	36	5	3617	2315
Midland Company	471	14,042,340	69½ 6½	6	20898	19210
Midland Great Western (Irish)	50	725,332	23	4*	1370	1088
North British	99	3,163,450	14	5	2876	1774
Scottish Central	45½	1,364,228	24¾	—	1064	—
Shrewsbury and Chester	47	969,618	18½	5	1433	554
South Devon	55½	1,909,232	16¾	—	1509	782
South-Eastern	165½	8,116,914	22 21½	6¾	7610	6918
Taff Vale	38	879,110	—	6½	1881	1681
Ulster	36	684,684	45¾	—	747	952
West Cornwall	13	——	—	—	—	—
Whitehaven Junction	12	150,879	109	3	—	172
York, Newcastle, & Berwick	269	6,827,849	20¾	8	11664	10336
York and North Midland	255¾	4,968,918	37 6	8	7242	7889
FOREIGN RAILWAYS.						
Amiens and Boulogne	76½	873,338	8¾	4	1458	—
Dieppe	26	——	—	—	354	—
Dutch Rhenish	57½	——	—	—	869	—
Montereau and Troyes	71½	——	½	—	869	957
Northern of France	211	2,000,000	11¾	—	908	—
Orleans to Bourges (Central)	107½	——	—	—	14810	9076
Orleans to Tours	72	600,000	32	6	2652	2295
Paris and Orleans	82	2,011,720	32½	12½	346	2645
Paris and Rouen	85	2,082,916	22½	—	8408	6811
Rouen and Havre	59½	——	11¾	—	8652	3038
Strasburgh and Basle (monthly)	86	——	6	—	2458	1315
West Flanders (ditto)	—	——	1½	—	5040	5394
					997	—

* Interest.—Total for last week, £201,347, being an increase of £32,532 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	8	3
1024	Alfred Consols	8¾	7½
1000	Antimony & Silver-Lead	5	5½
1024	Ashburton United Mines	8¾	12
1624	Balleswidden	9	18
128	Balnoon Consols	42½	50
10000	Bauwen Iron Co.	6	6
1000	Barristown	5¼	1½ 2
4000	Bedford	2½ 3	3¼ 3¾
1244	Birch Tor Tin Mine	9	5 5½
8000	Blaenavon	50	12½
100	Botallack	182	25
120	Brewer	5	3
10000	British Iron, New, regis.	12	8
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	12½
1000	Callington	20	10 12
1000	Camborne Consols	5	3
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	1½
256	Caradon Mines	22½	10
256	Caradon United	24	5 8
256	Caradon Wh. Hooper	21	4¾
1000	Carn Brea	15	104
3000	Carthew Consols	1½	5
114	Charlestown	220	—
500	Comblawn	5½	4½
128	Comfort	45	75
256	Condurrow	20	90 100
2560	Cook's Kitchen	14	2½ 3
1000	Coombe Valley Quarry	3½	4½
1000	Copper Bottom	1½	6½
212	Craddock Moor	23½	5
128	Creeg Braws	120	30
500	Cubert Mine	12½	—
1000	Cwm Erfin	3	2¾ 3¼
300	D. Prior & Buckfastleigh	—	—
7100	Derwent	8½	5
845	Devon & Courtenay Con.	7¾	¾
1024	Devon Great Consols	1	200 205 10
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	5½	4 5
10000	Durham County Coal	45	9
3000	Dyngwm	10	12½
512	East Alvenney	5½	6 6½
2500	East Birch Tor	3	2½
112	East Caradon	47	47
2048	East Crowndale	6½	4
512	East Combe Silver-Lead	6½	6½
128	East Pool	15	75 80
9000	East Tamar Consols	¾	¾ ¾
94	East Wheal Crofty	125	65 70
1024	East Wheal Fortune	2	3
128	East Wheal Rose	50	600
—	East of Scotland Iron Co.	5	1¾
123	East Wheal Seton	14	10
1280	Esgair Lli	1½	2½ 3
248	Exmoor Wh. Eliza	6	6
494	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3½
6400	Gadair	2	2
4000	Gen. Mining Co. for Irel.	1½	1½
256	Gonamena	44½	16
128	Goonvrea	4	2
256	Grambler & St. Aubyn	80	12 15
100	Great Consols	1000	190 200
512	Gt. Wh. Rough Tor Con.	18½	20 22
2000	Growa Slate Company	5	5
256	Gwinear Consols	7	1
6000	Helguston Down Con.	1½	1½ 1¾
256	Herodsfoot	27	15 17
10000	Hibernian	12½	1¾
239	Hobb's Hill	6	1¾
1000	Holmbush	22	5
1024	Kingsett and Bedford	¾	3½ 4
827	Kirkcudbrightshire	8½	3 4
2048	Lamherooe Wh. Maria	13	2
252	Lanarth Consols	—	4
128	Lelant Consols	90	40
160	Levant	—	180 200
1000	Lewis	16	10½
1000	Llwyn Malees	7½	7 8
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	19	14
6000	Marke Valley	10	¾ 1
25000	Mendip Hills	3	¾ 1½
128	Metha	34	140
20000	Mining Co. of Ireland	7	4
1280	Nantyeria	4	4
256	New East Crowndale	3½	2½
100	North Pool	45	621
140	North Roskear	5½	150
262	North Wh. Leisure	1½	2
256	North Wheal Basset	10	10 12
15000	Northern Coal Co.	23	2
128	Par Consols	55½	800
8000	Pennant & Craigwen	2	¾
1024	Penzance Consols	18s 3d	3
512	Plymouth Wh. Yeoland	6½	6
200	Polsaith Consols	5½	4½
2500	Rhoswiddol & Bacheldon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
2048	Runnaford Coombe Tin	¾	12
9000	South Tamar	¾	¾ 1
128	South Caradon	5	400
1100	South Dolcoath	4	5

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	Sth. Friendsh. Wh. Ann	20	4
256	South Molton	5	15
256	South Tolgus	14	55 60
256	South Trelawny	28½	2 3
2000	South Wales Mining Co.	½	1 1½
128	South Wheal Basset	20½	290 95
124	South Wh. Frances	160	260
256	South Wh. Josiah	—	3
1000	South Wh. Maria	2½	1½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	70 90
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	17 17½
9600	Tamar Consols	3	7 7½
1024	Tavy Consols	6	1½ 2
6000	Tincroft	7	11
1000	Tin Vale	2½	2¾
58	Tokenbury	170	10
256	Tregordan	2	4 6
256	Trehane	1½	25 26
5000	Treleigh Consols	6	2 2½
2000	Trenance	3	—
96	Tresavean	10	150
120	Trethellan	5	15 16
120	Treviskey and Barrier	130	88 93
268	Trevean	1½	5
100	United Mines	300	200
256	Wellington Mines	25	35 40
128	West Buller	10	317½
256	West Caradon	20	110 115
512	West Fowey Consols	40	12
256	West Providence	9	15
200	West Seton	40	225 230
—	West of Scotland Iron Co.	240	90
120	West Trethellan	5	16
256	West United Hills	—	4½
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
8725	West Wheal Jewel	11	¾ 1½
256	West Wheal Tolgus	80	14 15
256	West Wheal Treasury	19	4½ 5½ 8
1024	Whiddon Mines	4½	2
5200	Wicklow Copper	5	8¾
107	Wheal Adams	79	30
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
240	Wheal Anderton	25½	29½
128	Wheal Ann	—	50
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	15
256	Wheal Benny	14½	2
256	Wheal Blencowe	21	10
256	Wheal Bucketts	20	8
232½	Wheal Calstock	9	15
1024	Wheal Coad	1	4
268	Wheal Courtenay	12½	—
256	Wheal Fortescue	6½	—
388	Wheal Franco	27	13½
128	Wheal Harriet	45	—
100	Wheal Henry	—	20 5
112	Wheal Margaret	79	200
512	Wheal Mary Ann	5	16 17
208	Wheal Mary Consols	60½	8
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	3
198	Wheal Seton	214	275
180	Wheal Sisters	35½	5
494	Wheal Sophia	4½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	7	10
260	Wheal Trelawny	7½	75 80
256	Wh. Tremaine (St. Ervan)	9½	2½
1024	Wheal Tremayne	9½	4 5
92	Wheal Tryphena	140	265
1000	Wheal Vincent	2	7
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
250	Wheal Williams	28½	8
1024	William & Mary Worth	2	2½

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	2½
15000	Asturian Mining Co.	15	3½ ¾
20000	Australian	3	6½ ¾
10000	Anglo-Mexican Co.	100	¾
12374	Ditto Subscription	25	1½
6000	Barossa Range	1½	2 2½
3000	Bolanos	150	2 2½
2000	Ditto Scrip	1½	2½ 2¾
10000	Brazilian Imperial	23	4
12000	Cobre Copper Co.	40	24
10000	Copiapo Mining Co.	14	4 4½
20000	General Mining Ass'n.	20	14
4000	Guadalcanal	5	10 12
5000	Kinzigthal Mining Ass.	2	2
5051	Mexican Company	59½	—
2000	Mexican & South Amer.	8	1 1½
5000	National Brazilian	30	3½ ¾
104000	N. Brit. Australasian	1	¼ ¾
7000	Royal Santiago	10	5½
11000	St. John del Rey	15	11½ ¾ 12
13174	United Mexican ... Av.	28½	3½ 3¾

**** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, APRIL 27, 1849.

ENGLISH IRON. *a*	*per ton.*
Bar, bolt, & square, London	£6 12 6
Nail rods	7 10 0
Hoops	9 0 0
Sheets (singles)	10 0 0
Bars, at Cardiff & Newport	5 10 0
Refined metal, Wales*	4 0 0
Do. anthracite*	4 0 0
Pig, No. 1, Wales, cold-blast	3 15 0
Do. do. hot-blast	3 10 0
Do., No. 1, Clyde ....*net cash*	2 6 0
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport*	4 0 0
Do., do., for tin-plates, boiler plates, &c., ditto	4 10 0
Stirling's Patent Toughened Pigs, in Glasgow	3 3—3 6
Stirling's Patent Toughened Pigs, in Wales	4 0—4 15
Staffordshire bars, at the works	7 10
Pigs, in Staffordshire	3 0—3 15
Rails	5 10
Chairs	4 0
FOREIGN IRON. *b*	
Swedish	13 10 0
CCND	17 0 0
PSI	——
Gourieff	——
Archangel	12 10 0—13
FOREIGN STEEL. *c*	
Swedish keg	14 10 0
Ditto faggot	16 10 0
ENGLISH COPPER. *d*	
Sheets, sheathing, & bolts, *p. lb.*	0 0 10
Tough cake ....*per ton*	88 10 0
Tile	87 10 0
Old copper *e* ....*per lb.*	9*d*
FOREIGN COPPER. *f*	
South American, in bond	£73—75
ENGLISH LEAD. *g*	
Pig ....*per ton*	16 0 0
Sheet	17 0 0
Red lead	17 10 0
White ditto	22 0 0
Patent shot	19 15 0
FOREIGN LEAD. *h*	
Spanish, in bond	15 10 0
American ditto	——
ENGLISH TIN. *i*	
Block ....*per cwt.*	4 9 0
Bar	4 10 6
Refined	4 16 0
FOREIGN TIN *k*	
Banca, in bond	4 14 0
Straits	4 12 0
Peruvian (6 mo 2½ p. ct. dis.)	——
TIN-PLATES. *l*	
IC Coke ....*per box*	1 9 0
IC Charcoal	1 12 6
IX ditto	1 18 6
SPELTER. *m*	
Plates, warehoused ....*per ton*	16 5 0
Ditto, to arrive	15 15 0
ZINC. *n*	
English sheet ....*per ton*	22 0 0
QUICKSILVER *o* ....*per lb.*	0 3 3

Terms.—*a*, 6 months, or 2½ per cent. dis.; *b*, ditto; *c*, ditto; *d*, 6 months, or 3 per ct. dis; *e*, 6 months, or 2½ per cent. dis.: *f*, ditto; *g*, ditto; *h*, ditto; *i*, ditto; *k*, net cash; *l*, 6 months, or 3 p. ct. dis.; *m*, net cash; *n*, 3 months, or 1½ p. c. dis.; *o*, ditto, 1½ dis.

* Cold-blast, free on board in Wales.

REMARKS.—The transactions which have taken place in all descriptions of metals during the past week has been of a very limited character, and to supply only immediate wants.—Welsh bars must be again written lower. The scarcity of orders is beginning to be severely felt by the makers, who show every disposition to meet buyers. Some little business has been done by intermediate holders, at 5*l.* 7s. 6d. per ton, free on board at the port; our quotation is, therefore, nominal.—Scotch Pig-Iron: The unfavourable accounts received from America and the continent, have had a prejudicial effect upon this article, and the market continues in a very depressed state. Prices of ordinary brands have given way about 1s. per ton during the week, and Gartsherrie about 2s. 6d. We quote mixed Nos. 45s. 6d. Stocks are rapidly increasing, and with the present disposition on the part of the makers to sell, it is expected that much lower rates will rule.

GLASGOW, APRIL 26.—The demand for pig-iron continues small; consumers seem indisposed to make purchases beyond the necessities of the moment. The stock is still on the increase; that, together with the fall in value of the article in the United States, has had a tendency to keep down prices here. We quote the price to-day at 46s. to 46s. 6d. for mixed Nos.—cash.

LEAD ORES.

Ticketings at the King's Head Hotel, Holywell, April 26.

Mines.	*Tons.*	*Amount.*	*Purchasers.*
Pantymwyn	40	£10 0 0	Walker, Parker, & Co.
Pen-yr-henblas	57	10 5 6	Walker and Eyton.
ditto	50	10 6 0	Mather and Walker.
Westminster	55	9 9 0	Walker, Parker, & Co.
Jamaica	40	9 18 0	Newton Keates & Co.
Belgrave	30	10 0 0	Walker, Parker, & Co.
Deep Level	67	10 5 0	ditto
Catch	7	10 8 6	J. P. Eyton.
Milwr	50	11 8 0	Walker, Parker, & Co.
Douglas	90	10 12 0	Mather & Co.
Peel	75	10 9 0	Newton, Keates, & Co.
Conlig	80	9 16 6	Walker, Parker, & Co.
Total tons	641.		
Sold at the Mine.			
East Wheal Rose	44	£15 5 0	R. Michell & Son.
ditto	25	13 19 0	Sims & Co.
ditto	12	8 4 0	ditto
Sold at London.			
Wheal Adams	26	£9 11 0	Sims & Co.
Sold at Liskeard.			
Wheal Trelawny	105	£17 18 6	T. Somers.
Sold at Aberystwith.			
Gogiunan	40	£14 13 6	Newton, Keates, & Co.
ditto	75	14 10 6	ditto
Frongoch	90	10 0 0	Bristol Company.
Graigoch	44	9 9 6	Newton, Keates, & Co.
Cwmystwith	40	9 15 0	Bristol Company.
Total tons	289.		

BLACK TIN

Mine.	*Tons.*	*Price.*	*Purchasers.*
East Crowndale	10	£45 0 0	Calenick Co. and Williams.
Polberrow	19½	6 0 0	Daubuz and Enthoven.
ditto	6¾	44 2 6	Williams and Co.
ditto	3¼	44 0 0	J. H. Enthoven & Co.
ditto	1½	37 0 0	Calenick Smelting Co.
West Wheal Jewel	3½	49 2 6	Bissoe Company.
ditto	3½	46 7 6	Calenick Smelting Co.
ditto	3½	46 17 6	ditto
ditto	3½	47 7 6	ditto

COPPER ORES.

Sampled April 11, and Sold at Andrew's Hotel, Redruth, April 26, 1849.

Mines.	*Tons.*	*Price.*	*Mines.*	*Tons.*	*Price.*
United Mines	125	£2 14 6	South Caradon	63	£9 1 6
ditto	113	3 2 6	ditto	60	6 4 0
ditto	110	5 8 6	ditto	58	7 0 6
ditto	100	4 8 6	ditto	38	6 14 6
ditto	99	3 17 0	ditto	25	4 13 0
ditto	98	3 15 0	Wh. Henry	65	Withdrawn, to be sold next week at Camborne.
ditto	93	4 3 6	ditto	57	
ditto	89	4 0 6	ditto	53	
ditto	73	2 5 0	ditto	43	
ditto	69	4 4 6	ditto	22	
ditto	68	5 8 0	Tresavean	94	4 16 0
ditto	67	4 15 6	ditto	83	3 11 0
ditto	66	5 8 6	Treleigh Consols	55	13 15 0
ditto	61	2 9 6	ditto	47	4 9 0
ditto	52	3 13 6	ditto	13	2 13 0
Par Consols	102	4 7 0	Wh. Banns	43	4 17 0
ditto	97	6 1 6	ditto	30	1 8 6
ditto	89	8 2 6	West Wh. Jewel	70	4 2 0
ditto	88	7 19 6	West Trethellan	31	3 10 0
Wh. Comfort	94	1 18 6	Wh. Brewer	14	2 19 6
ditto	82	1 18 6	East Downs	9	4 17 6
ditto	52	4 17 0	North Downs	8	5 5 0
ditto	43	1 8 0			

TOTAL PRODUCE.

United Mines	1283	£5071 3 6	Wh. Banns	73	£251 6 0
Par Consols	376	2457 18 0	West Wh. Jewel	70	287 0 0
Wh. Comfort	271	651 4 0	West Trethellan	31	108 10 0
South Caradon	214	1722 19 6	Wh. Brewer	14	41 13 0
Wh. Henry	240	Withdrawn	East Downs	9	43 17 6
Tresavean	177	745 17 0	North Downs	8	42 0 0
Treleigh Consols	115	999 17 0			

Average Standard ....£112 3 0 | Average Produce 6¾
Average Price per ton £4 13 6
Quantity of Ore ....2671 tons. | Quantity of Fine Copper, 176 tons 5 cwts.
Amount of Money £12,423 5 6
LAST SALE.—Average Standard ....£ 99 17 0.—Average Produce 9¾
Standard of corresponding sale last month, 107*l.* 5s.—Produce, 7½.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	155	£740 17 6
Vivian and Sons	494	2241 6 9
Freeman and Co.	372	1777 12 6
P. Grenfell and Sons	441	1899 10 0
Sims, Willyams, and Co.	498	2156 4 6
Williams, Foster, and Co.	588	2942 2 0
Schneider and Co.	123	665 11 6
Total tons	2671	£12,423 5 6

Copper ores for sale on Thursday next, at Tyack's Hotel, Camborne.—Mines and Parcels.—North Roskear 962—North Pool 691—Consolidated Mines 512—Tincroft 353—Fowey Consols 297—Wheal Seton 262—South Wheal Basset 216—South Wheal Frances 169—Creeg Braws 150—South Roskear 133—Wheal Vyvyan 36—Wheal Union 8—Wheal Northy 2—Wheal Henry 240.—Total quantity to be sold, 4031 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea 786—Tywarnhayle 360—Par Consols 334—Levant 255—West Wheal Treasury 164—Wheal Tremayne 123—West Wheal Buller 115—Wheal Agar 102—South Crinnis 101—Great Work 95—Wheal Busy 54—Wheal Friendship 38—Alfred Consols 38—Wheal Venture 15—Carzise 4.—Total, 2584 tons.

COPPER ORES

Sampled April 4, and Sold at Swansea, April, 26, 1849.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Cobre	115	13¾	£10 18 0	Burra Burra	66	32½	£27 0 0
ditto	111	13¾	10 19 0	ditto	63	31¾	26 7 0
ditto	97	13¾	10 11 0	ditto	62	31¾	25 15 0
ditto	95	13¾	10 7 0	ditto	61	31	25 13 6
ditto	78	21¾	17 14 0	ditto	60	30½	25 12 6
ditto	75	20¾	16 15 0	ditto	35	31¾	25 4 6
ditto	60	22	17 18 6	Berehaven	124	11¾	9 10 0
ditto	54	21	17 5 0	ditto	95	11¾	9 7 6
ditto	52	22½	17 3 6	Ballymurtagh	41	5½	3 18 6
ditto	31	23	18 14 6	ditto	39	5	3 10 0
ditto	74	21¾	17 15 0	ditto	6	7	5 9 6
ditto	62	23¾	18 12 6	Chili	45	27¾	22 14 6
ditto	61	23½	19 10 6	Aberdovey	18	10	8 5 6
ditto	59	20¾	17 2 6	ditto	6	4¾	3 5 6
ditto	55	20½	16 11 6	Vine Slag	16	4½	2 14 0
ditto	51	23½	19 2 0	ditto	7	4½	2 15 0

TOTAL PRODUCE.

Cobre	1130	£17148 7 0	Chili	45	£1022 12 6
Burra Burra	347	9025 2 0	Aberdovey	24	168 12 0
Berehaven	219	2068 12 6	Vine Slag	23	62 9 0
Ballymurtagh	86	330 5 6			

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	144	£1974 19 3
Freeman and Co.	76	1805 14 3
Grenfell and Sons	231	3866 13 6
Sims, Willyams, and Co.	118	2685 2 0
Vivian and Sons	567	6768 7 0
Williams, Foster, and Co.	426	6777 7 0
Mines Royal	37	656 15 0
Schneider and Co.	275	5301 2 6
Total tons	1874	£29,836 0 6

Copper ores for sale May 10.—Cobre 96, ditto 91, ditto 86, ditto 74, ditto 64, ditto 59, ditto 56, ditto 110, ditto 105, ditto 92, ditto 53, ditto 46.—Berehaven 127, ditto 123, ditto 97, ditto 89.—Knockmahon 79, ditto 77.—Chili 48.—Ballymurtagh 29.—Burra Burra 24, ditto 1.—Total, 1626 tons.

MINING APPOINTMENTS FOR MAY.

2. Devon Consols sampling.
3. Ticketing at Tyack's Hotel, Camborne, North Roskear, North Pool, and other mines.
4. East Pool Mine pay and setting-day.
5. West Wheal Jewel ditto.—Vice-Warden's Court held at Truro.
7. South Frances account on the mine.
9. Consols and United Mines sampling.
10. Ticketing at Andrew's Hotel, Redruth, Carn Brea, and other mines.
12. Wheal Mary pay day.
14. Annual meeting—West Wheal Jewel.
16. Great Consols account at the mines—North Pool, East Crofty, and Seton sampling.
17. Ticketing at Pearce's Hotel, Truro—Devon Consols and other mines.
19. Wheal Seton pay day.
21. Treviskey and Barrier account.
22. East Wheal Crofty account at the mine.
23. Devon Consols account—Carn Brea sampling.
24. Ticketing at Pearce's Hotel, Truro—Consols, United, and other mines.
29. Tresavean account at the mine.
30. No sampling this week.
31. Ticketing at Tyack's Hotel, Camborne—North Pool, Wheal Seton, East Crofty, and other mines.

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NOTICES TO CORRESPONDENTS.

*** We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

"A. B." (Belfast).—Polished iron is bronzed, or browned, in the following manner:—Take nitric acid 1 oz., sweet spirits of nitre 1 oz, spirits of wine 2 ozs., blue vitriol 4 ozs., tincture of steel 2 ozs. These ingredients are mixed, the vitriol having been previously dissolved in a sufficient quantity of water to make, with the other ingredients, half a gallon of the mixture. Previous to browning, it is necessary that the iron be well cleaned, and freed from all grease, or other impurities. The mixture is then applied with a clean rag, or piece of sponge, taking care that every part is covered; it must then be exposed to the air for 24 hours, and then rubbed with a hard brush, to remove the oxide from the surface. This operation is to be performed two or three times if requisite; it is then to be carefully brushed and wiped, and immersed in boiling water, in which is held in solution a quantity of alkaline matter, in order that the action of the acid on the iron may be destroyed. When taken from the water the iron must, after being rendered perfectly dry and clean, be rubbed smooth with a burnisher of hard wood, and then heated to about the temperature of boiling water. It is then to be varnished by a mixture composed of the following materials:—Spirits of wine 1 quart, pulverised dragon's blood 3 drachms, bruised shellac 1 oz. When the varnish is quite dry, it must be rubbed with the burnisher, to give it a smooth and glossy surface.

"A Speculator" must apply to a mine agent respecting the value of the shares in the Keswick Mines.

J. Francis (Chorlton-upon-Wedlock).—There can be no doubt that, to a person of the experience in mining and metallurgical manipulation, which our correspondent describes, South Australia would open an active and remunerative field for his abilities and enterprise. He is correct in the supposition, that the oxides and sulphurets of copper, so abundant there, could be advantageously reduced on the spot to the greatly increased value of the mines Smelting-works are already commenced, and we fully expect, by our next advices, to hear of successful operations having been carried out. We should recommend an advertisement as a sure mode of making the capabilities of the party known to those who would be able to appreciate his services, rather than waiting for the precarious chances of recommendation.

"H. M." (Mieres del Camino).—The quicksilver mines of Idria produce about 164 tons yearly; the Bavarian quicksilver mines are situated on the frontiers of Prussia, not far from the town of Kreugnach, near the villages of Bingart, Nieder Moschel, Ober Moschel, and Alzens; they are said to have been worked from four to five centuries. The produce is about 67,000 lbs. per annum; there are silver and lead mines in the vicinity.

"W. H." (Leeds).—In our notice to you on the 14th inst. we stated that the Hamburg contract was taken by Messrs. Malam, Parker, Croskill, and Co., for 150,000*l.*; our information was obtained from a party in the service of one of the contractors—we since learn from a correspondent that this was incorrect. The contract was taken at 88,500*l.*; the service pipes, both for lamps and houses, were included, without limitation as to length; some of these extend from 100 to 180 feet, and a few are 200 feet distance from the main. The contract was to be completed in three years, and if not finished in that time what remained was to be considered as not contracted for. The contract has only been executed to the amount of 72,000*l.*, and the company are finishing it themselves. The fitting department for above a year has been thrown open to all mechanics in Hamburg; but they must submit to have their fittings proved by a mechanical commission, under a pressure that will sustain a column of mercury 1 inch in height.

"A Young Mole" (Liskeard).—The patent of A will, of course, preclude B from applying the same article for other purposes, without the license of A—provided A's patent is so specified as to include other purposes; but if it be not so specified, then it becomes a matter for consideration, and reviewing the details of the case.—Apply to Mr. Campin, Patent Office, Strand.

Mr. Lake's papers on Pyrogen will be continued in next Journal.

"T. M." (Callington).—The largest piece of gold, of which we have any authentic account, is now in the Imperial Museum at St. Petersburgh; it is of the enormous weight of 60 lbs. It is not exhibited to visitors, but a perfect model of it is shown. Previous to the discovery of this, according to Humboldt, the largest mass was found in 1730, at La Paz, in Peru—this weighed 45 lbs.

J. Young (Cornhill).—Mirrors are silvered by a mixture of tin and mercury, which combine in definite proportions and crystallise on the glass. The date of the discovery is uncertain, but, according to the best evidence, it proceeded out of Venice at a period when the alchemists were busy with metals, in the wild expectation to transmute them into gold. In searching for a chimera, they lighted upon a beautiful domestic invention. The Roman and Grecian mirrors were of tin, or polished steel.

"A. B."—Building stone has been in general regarded as a mineral, though we do not apprehend it would have to pay the same dues as minerals containing metal. The proprietor of the surface has, we should think, the right of quarrying for building stone, even though the mines and minerals belong to another party: it would, however, greatly depend upon the tenure and terms of the lease under which the latter were held, and we think would be a fit subject for legal advice.

"T. B." (Swansea).—Our endeavours to obtain the information you desire have been hitherto fruitless. We shall not relax, and hope next week to meet with better success.

"Chemicus" (Ryde).—Ransome's artificial stone is to be obtained of the patentee, in Ipswich. Oolite, or roestone, in blocks, for building purposes, can be had at any stonemason's yard in London. Small specimens of roestone, or oolite, for the miscroscope, or scientific experiments, are to be purchased of Mr. Tennant, mineralogist to the Queen, Strand.

"Anglo-Chilian."—We are yet unable to publish any particulars respecting the proposed British Copper Smelting Company. Apply at the office, 2, Moorgate-street.

"J. K." (Queen's College, Cambridge).—A notice respecting the slate trade appears in another column. We shall, next week, give a list of prices, and other particulars.

"H." (Hamburg).—We are obliged for the communication, but regret we cannot comply with the request; if it is, as rightly surmised, against our rules.

"H. Bloxam" (Jermyn-street).—The Skerryvore Light-house is 120 feet high, the base is 42 feet, and the top 16 feet. The first stone of it was laid July 7, 1839, by the Duke of Argyll. The architect and engineer who built it is Mr. A. Stevenson, whose father erected the Bell Rock Light-house. The light was first exhibited Feb. 1, 1844. The foundation pit, which is in gneiss, is 42 feet deep; to excavate this it required the labour of 20 men for 217 days, the firing of 296 shots, and the removal into deep water of 2000 tons of material. Eddystone Light-house was built in 1696; Mr. Winstanley, the architect, perished in a storm there, a short period after it was erected.

"A Student" (King's College).—Crystallised iron pyrites was artificially formed by Wohler. In a glass flask, or other convenient vessel, there was subjected to a slow heat peroxide of iron, sulphur, and hydrochloride of ammonia; these were intimately mixed, until all the ammoniacal salt was sublimed—the mass was then suffered to cool slowly, and afterwards washed with water. At the bottom of the vessel there were discovered heavy octohedra and tetrahedra, of a yellow colour, which were identical with the common crystallised pyrites. The larger the mass of materials, the larger and more perfect are the crystals obtained.

G. Andrews (Redruth).—Capt. Savery, a Cornish miner, was the first who contrived a steam-engine of practical utility; he, however, borrowed the idea from the *Century of Inventions*, written by the Marquis of Worcester; but, anxious to conceal the obligation, he purchased and destroyed all the copies he could find. Newcome, an ironmonger, and Cawley, a glazier, followed in his track. Humphrey Potter was the next: a story is related of him, that, when a boy, having to turn the cocks upon which the working of the engine depended, he one day observed, in the agony of his anxiety to join his companions at play, a method of attaching the cords which would make the engine perform his office for itself. This, however, has been discovered by competent authorities, and who all agree that the effect of his improvements was solely to increase the working speed. It was at that period a complex machine, with a diversity of catches and strings, which the great Watt simplified, and laid the foundation of the gigantic improvements which have taken place in the present century.

R. Michell (Truro).—The use of the pick and gad, as employed by our Cornish miners, is comparatively little known in the German and Scandinavian mines. The ground being in general hard, boring is resorted to, and where that is not essentially required, the miners prefer using gunpowder to manual labour.

"A Constant Reader" (Daventry).—Mr. de Sussex's process for "Improvements in the Smelting of Copper and other Ores," was patented the 23d of March, 1847—a copy of the specification was published in our Journal of the time. It was to have been practically tested last year, but, owing to some cause the experiment was not carried out. A company in Australia have commenced copper smelting on Napier's patent.

"Chemicus" (Liverpool).—Antimonial nickel was discovered at Andreasberg, in the Hartz, by Volkmar, a pupil of Hausmann; its colour is light red, with a strong inclination to violet—it is scratched by felspar, but scratches fluor-spar. According to the analysis of Professor Stromeyer it contains 31·207 nickel, and 68·793 antimony.

H. Browne (Cirencester).—The Gogerdon Mines, near Aberystwith, are at present but little worked. They were originally the property of Sir Hugh Middleton, who brought the New River to London; in his time, it is stated they returned a profit of 25,000*l.* annually.

James Harries (Lincoln).—Blende or black-jack, is one of the most general ores of zinc, and is found in nearly all mineral localities; it is of a greyish and velvet black colour, brittle, and semi-hard; in occurs in general in gneiss and granite, accompanying copper pyrites, iron, antimony, and several other metals.

"A Miner" (Redruth).—One of the first instruments for ventilating mines was invented in 1722, by Dr. Desaguliers. It consisted of an engine with a triple crank, working three pumps, which sucked and forced the air by three regulators: these were alternately applied to drive air into, or draw it from, any place, through wooden trunks, which were made of slit deal, 10 in. wide in the inside. They were easily portable, and joined to each other without much trouble.

"H. L." (Hull).—The pigment called Naples yellow, is of metallic formation; it consists of 3 parts of white oxide of antimony, 12 parts of white oxide of lead, 1 part of sulphate of alumina, and 1 part of muriate of ammonia. These must be first heated weakly for some hours, and then kept in a red heat.

"T. H. F." (City).—The Quenangen Mines are situated about 20 miles, in a south-east direction, from the mines worked by the Alten Company. There is no road between them; the communication is by water, which increases the distance to about 250 miles. The ores produced there are of a similar nature to those at Alten. All information regarding them can be obtained of Mr. Cole, the secretary of the Alten Mining Association, 2, Old Broad-street.

"Nauticus" (Wapping).—The narrowest part of the Atlantic is two miles deep; in other parts about a mile and a half. In the Mediterranean, between Nice and Genoa, it is near 2000 fs.; and near Gibraltar, 500 ft.

"W. H." (Hanley Potteries, Staffordshire).—In our remarks in last week's Journal, in a paragraph on "Accidents from Breakage of Ropes in Mines," we could not have the slightest intention, or wish, to prejudice the invention we attempted to describe, or in any way to wound the feelings of the author. It cannot, however, be expected that we can comment upon a plan, or pass any judgment as to its efficiency, or otherwise, for the purposes intended, unless made fully acquainted with its principles. The so-called model, with the diagram forwarded, we regret again to state were to us totally incomprehensible, if our description was so completely at fault; and the communication of the 24th, since received, does not further enlighten us on the subject. If there is any merit in "W. H.'s" plan, and he will send us a proper description and diagram, we will do all in our power to forward his views and interests.

"J. P." (Leicester).—Mr. Parker's papers, on the Evaporation of Water in Steam Boilers, are to be found in parts 1, 2, and 4 of vol. iii. *Transactions of the Institution of Civil Engineers*—Messrs. Longman and Co., publishers. Part 4 can be had of Mr. Weale, High Holborn; but it is doubtful whether they will now sell them separately. The whole volume consists of five parts, and sells for 2*l.* 12*s.* 6*d.*, and can be had of either bookseller.

"G. T. W." (Rye).—White tombac is composed of copper, alloyed with zinc or arsenic.

*** It is particularly requested that all communications may be addressed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, APRIL 28, 1849.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

The mining ordinances of Spain have been long celebrated for their perspicuity and admirable adaptation to the particular branch of industry for which they were designed. Circumstances, however, have, from time to time, made it necessary to introduce alterations and modifications of those laws; and, at length, the Spanish Government has seen fit to pass an Act, combining all the provisions relating to the encouragement and regulation of mining in Spain. This Act was published in the *Gaceta de Madrid* of the 14th inst.; and we have now great pleasure in directing the attention of our readers to a translation of the same, made expressly for the Mining Journal—the first part of which appears in our columns this day.

The Spanish Government, in framing these mining laws, have been guided by a liberal policy. They have wisely made no distinction between the native and the foreigner, but admit both equally to explore the mineral fields of Spain; and while every necessary protection is afforded to the owners of private lands and buildings, proper provisions are introduced for assisting the miner, or smelter, in his operations. The importance of a knowledge of these laws to all those who may be engaged, or in any manner interested, in the mines or reduction works of Spain is obvious. As a mining country, Spain is again rising in importance. The Spaniards, when they so zealously left their native land to explore the distant regions of the western world, were little aware of the wealth which still existed in their own native rocks; and that search for the metals at home might be equally successful with that in Mexico. We now see rich mines opening in various parts of Spain. In Andalusia, Granada, Guadalajara, the Asturias, and other parts, copper, iron, lead, silver, and coal, are found in greater abundance every day.

Among the numerous subjects connected with mining, and the other sciences to which our columns are devoted, and more particularly at the present moment, when the Legislature is deeply engaged in the consideration of the question, preparatory to the introduction of a motion by Mr. Hume, the means of securing a greater degree of safety for human life in our mines is altogether paramount. That the Government are, at length, aroused to the necessity of some interference in the working of coal mines, we think there is no longer doubt; and to gain every information necessary, Mr. Seymour Tremenheere, the inspector of mines, was sent to make every possible inquiry relative to the Darley Main Colliery explosion, whose report thereon we have received. After noticing the evidence adduced on the inquest, which we fully reported at the time, Mr. Tremenheere states his conviction, that the jury, without imputing criminal negligence to any one connected with the mine, show, by the verdict, that in their opinion, the ventilation had not been managed with all the care and skill that the circumstances of the colliery demanded. This was the more evident, as an explosion took place in this very colliery only two years since, by which six persons lost their lives; and it transpired, during the inquiry, that Mr. Locke, the manager, had expressed dissatisfaction at the mode of ventilation, but that he had not been a free agent to adopt those improvements which he considered desirable. The general impression is, that had this colliery been subject to the inspection of a properly qualified officer of the Government, there can be no doubt that the manifest errors and defects of its ventilation would have been strongly pointed out; nor is it to be imagined that, when so pointed out, the owner of the colliery would have been satisfied with the responsibility of leaving them uncorrected. It is not too much to say that, had such inspection been brought to bear on this colliery, even since the explosion of 1847, the late lamentable sacrifice of 75 lives would, in all probability, not have occurred. It was only in that year also that an explosion took place at the Ardsley Main Colliery, about two miles off, whereby 73 persons were killed; thus, in about two years, 154 persons lost their lives by only two explosions in this neighbourhood alone, which there is every reason to believe a proper system of Government inspection would have prevented.

In this report Mr. Tremenheere recapitulates his own evidence before the coroner, and as it is important touching his duties as Government Inspector of Mines, we shall refer to it, to prevent any erroneous impression as to the powers with which that gentleman is invested. His appointment and duties as inspector of mines arose out of Lord Ashley's Act, 5 and 6 Vic., c. 99, and his instructions were, to inquire into and report the manner in which this particular law was observed, relative to the employment of women, and boys under 10 years of age underground; but has nothing whatever to do with ventilation or any internal arrangements—in fact, Mr. Tremenheere states, that he has himself no practical acquaintance with matters of the kind, and his communications are the results of inquiries from persons most competent to form an opinion from their experience in all the mining districts, and from a full and fair consideration of all the information obtained, he is of opinion that "a system of inspection not involving compulsory powers would be practicable, and, to a great extent, effectual." He recommends that the inspector should have power to examine and report, and to place such report on record; that the manager should have power to dissent from such report, and to call in some disinterested third party, whose report should also be placed on record; and he believes the inquiries and reports, and the full discussion which the system of ventilation in any particular mine where the inspector saw defects would be subject to, would lead to the needful modifications, and reduce the chance of explosions.

The report, after dwelling on the great advantages of mining schools on the continent, and expressing regret that this country has so long neglected such obvious means of usefulness, says—"The foundation on which such a school might be established has been already laid in this country, in the Museum of Economic Geology, which corresponds to the valuable Museum of the School of Mines, at Paris. That some means are wanted to raise the standard of scientific knowledge among persons intrusted with the management of collieries in this country, has been long felt; and perhaps no circumstance has occurred lately which more strongly confirms that opinion than the late lamentable explosion at Darley Main. It was obvious, on the examination of the underground steward, Joseph Thompson, that he was a very illiterate person; he could only read very imperfectly, and could not write; yet he was entrusted with the entire of the underground management, and upon the discretion of this illiterate man the daily safety of 100 lives depended—it was he alone who was supposed to be able to observe with intelligence any of those varying circumstances which so rapidly alter the conditions of safety in a mine, and to act upon those observations with promptness and caution." There can be no doubt that an institution of great national benefit, as a School of Mines, might be established on the foundation of the Museum of Economic Geology, which, in combination with a system of inspection on a plan not to interfere unnecessarily with the rights of private property, would place us on a footing with our continental neighbours, tend to the safety of health and life among the mining population, and be productive both of public benefit and national honour.

While on this interesting subject, we would briefly allude to a plan published in the Mining Journal of the 7th of August, 1847 (and which we omitted to include among other propositions enumerated in our remarks in last week's Journal), for clearing old workings in the thick coal seams of Staffordshire, of accumulations of carburetted hydrogen, by Mr. George Shepherd, C.E. He there proposes that, instead of the objectionable mode of damming up the gas, as at present practised, there should be flues in the up and down-cast shafts, and carried under the gate-roads, in the

form of culverts, to the extent of the old workings, by which means there would be at the disposal of the miner an independent current of air for the purpose of clearing the old workings, or at least those parts nearest to the new ones. They might be entirely swept of the gas they contain, instead of, as now, forming large and dangerous reservoirs. Although many objections, Mr. SHEPHERD says, may be made to the expense, there is one direct advantage over the old system—the gate-roads in the opening of the works might be driven without seperate headings, which are unavoidable at present, and which would probably about counterbalance the expense of the flues or culverts.

Teeming with mineral wealth of nearly every description, and with agricultural capabilities for the production of all the necessaries and comforts required for the use of man, it is most grievous to the philanthrophic mind to witness the destitution, and apparently the very absence of hope, among the majority of the rural population which still exists in ill-fated Ireland. Blest as some countries would be in the possession of every natural production which has developed those resources of labour throughout the land, and raised England to the highest pinnacle of wealth and honour among the nations of the earth, it does appear an anomaly that, with the same resources planted by the hand of Nature, with a hardy population, imbued with a powerful innate love of country, and her most favourable geographical position for trade and commerce, Ireland should be sunk in idleness, apathy, and crime, and that its very resources should be a curse instead of a blessing. We have so often dwelt on this unhappy subject, so often indulged in the hope of approaching improvement and amelioration in the condition of the people, and as often fated to drink of the bitter cup of disappointment, that we are now almost despondent of the case, and can only hope for a change for the better in those revolutions which often most unexpectedly occur in the destinies of nations, as of individuals. Ireland is at the lowest point of Fortune's wheel, and the slightest movement must elevate her from her present wretched and unnatural position. Our correspondent's observations on the safety of capital are correct, and for the very low wages the labourers would work for a sure return would result. We are informed by a gentleman possessing positive local knowledge, that they submit, and patiently too, to a system of wages and general treatment, under the cursed truck system, such as no Englishmen would endure; yet *they* work on, and are glad to have even a trifle for their families; surely it but requires the English capitalist to look on awhile, make himself truly acquainted with their character, and throw aside unworthy prejudice, to induce him to invest a portion of his capital, and develop the unworked and inexhaustible mineral resources of this naturally fine but ill-starred country.

We have been led to these remarks from perusing an excellently well-written article, on the mines of Ireland, by an "Anglo-Celt," which will be found in another column, and which carries conviction to the mind, that the mines of Ireland have yet never been to any extent even explored, and that in numerous localities the expenditure of comparatively small capital would lay open sources of continuous wealth, and carry employment, comfort, and civilization into districts at present groaning under misery and starvation. We have also in type another highly descriptive article on the mining districts, principally of Kildare, and the adjoining counties, by Mr. JOHN D'ALTON, of Summer-hill, Dublin, and which shall appear in our next Journal.

In our Journal of the 14th inst., we briefly alluded to the speculative theories which had been broached by some of our correspondents, on the art of making gold, at the same time we adverted to several of the projects of the older alchemists. Since our last we have been induced to scan several esteemed and ancient works of the old adepts, in order to discover if, among the mass of cabalistic mystery in which their writings were enveloped, something could be extracted which might be easily understood, or in some way rendered reconcileable to that simple and plain element—common sense. We sorrowfully admit that, after poring over musty folios and worm-eaten manuscripts, from HERMES to PETER WOULFE, we find ourselves shrouded in the same darkness, perplexed with the same doubts, which beset our clouded imagination when we commenced our task; our laborious research has but led to this melancholy result—a most infidel disbelief, which nothing but the evidence of our own senses can disprove, of the works of all alchemists, whether they be of ancient date or modern growth. True it is that Sir KENELM DIGBY, a most *veracious* authority, in his *Rare Secrets in Chemistry*, details fully the eight operations which are necessary to create the philosopher's stone, which not only professes to turn every metal into gold, but likewise possesses the power of prolonging life until an indefinite period—in short, so long until the machinery of Nature is entirely worn out, a grain being so powerful that it would restore people from the effects of malignant fevers, and transmute 156 grains of quicksilver to gold. RICHARD CARPENTER, a monk of Worcester, who flourished about the year 1477, gives this simple receipt for forming the grand arcanum. "Take the clear light of titan magnesia, and the bright red gum, which is the sulphur vive, or philosopher's gold; join them with the water of light, let no vapour escape, and keep the fire like the sunbeams in summer. In three hours you will see marvellous colours, black, white, red, and citron; let now your vessel be opened until you have engendered the blessed stone. URBIGERUS, after giving his receipt, which occupies several pages, informs us that the chemical operations consist solely in amalgamation, sublimation, dissolution, filtration, cohobation, distillation, separation, reverberation, imbibition, and digestion. Did our space allow it, we could add a number of receipts, which all, according to the several professors who invented them, were the only true and infallible ones; but the greater portion of these are so mystically and allegorically worded, that we are afraid the majority of our readers would be as ignorant of their meaning, as we honestly confess we are. Most of their experiments depended upon the state of the planets, and the different aspects of the heavenly bodies, and frequent allusions are made to a favourable opportunity of engendering the bright green dragon on the bold red lion—in fact, the science appears to have been a compound of astrology and pseudo-chemistry. At the same time, they professed to be men of most religious and pure life, bound by certain vows not to communicate the secret to others unless found worthy; but this, on every occasion, did not enable the possessor to avail himself of the knowledge which he had acquired; if an impure liver, or covetous man, though following every chemical formula, at the moment of projection, the athanor burst, and the great gift of the philosopher's stone was withheld from him. One of the most esteemed of the craft writes thus—"Whoever shall presume to prepare the great elixir, according to our most secret ways, without following and observing all these our infallible rules, will certainly find himself mistaken at last, having, after a great deal of trouble, charge, and pain, reaped nothing but discontent; and, on the contrary, they that shall walk in our true and infallible path shall, with very little trouble and expenses, attain to their desired end." HERMANN BOERHAAVE, one of the greatest chemists of his time, who wished to test the receipts of the alchemists, arrived at these simple conclusions. After distilling quicksilver with gold 877 times, which occupied a space of 15½ years, he found that, during that period, the gold lost nothing of its proper weight nor did it increase; that quicksilver was simple, and not to be separated by distillation in various bodies. That the theory of the alchemists of obtaining mercury from lead was absurd, and "that it was an indubitable fact that no fire can increase metal by quicksilver, by concreting with them, or generate anything metallic, or form any durable change of the metal. That the old alchemists avoided the difficult labour, and hastened precipitately to idle conclusions.

Such, in a few words, was the opinion of one of the most eminent chemists of the period in which he lived, and we do not think we shall be much in error if we prefer the correct results of patient study and laborious investigation, couched in a few words of common sense, to the voluminous theories and impracticable experiments of men who but imperfectly comprehended the first principles of their art, or understood the farrago of nonsense, and tissue of absurdity, they themselves uttered. One redeeming quality, however, generally pervades their writings—it is the wish to obtain the elixir, not as a means of wealth but health; and all, even those of the middle ages, were impressed with the firm conviction of the utter useлessness of the precious metals if rendered common, and the dangers which would accrue to society if so powerful an art was improperly exercised. That the supposed possession of the secret did not confer happiness, can be inferred from the following trite sentences of EIRENEUS PHILALETHES:—"Know that we are severely bound by strong vows never to supply any man by our art, who might confound the world if he held it at will. I wish gold and silver were as mean in esteem as earth, then we need not so strictly conceal ourselves. For we are like Cain, driven from the pleasant society we formerly had; now we are driven up and down, as if beset with furies, nor can we suppose ourselves safe in any one place long. We weep and sigh, complaining to the Lord, Behold, whosoever shall find me will slay me; we travel through many nations like vagabonds, and dare not take upon us the care of a family, neither do we ever possess any certain habitation; although we possess all things, we can have but a few. What, therefore, do we enjoy, but the speculation of our own minds?" And this, we fear, without attaining any of the presumed wealth of EIRENEUS PHILALETHES, is all that will be left to the modern alchemists.

We do not wish here to discuss the changes which would take place in society, or the total disruption of relations which would ensue if this feat was achieved; we think it would be taxing too much the patience of our readers, to assume the existence, and argue the probability of an impossibility. We are aware that the energy and perseverance of man may do much, that science in all its branches is still further to be developed, that many of the arts are as yet in their comparative infancy, susceptible of great changes and important improvements, that one substance may be engrafted on the other, and a hybrid produced; this is a combination, but no change. We may destroy and compose, we form and arrange, but we cannot add to the world a single particle, or take it away. We may discover the secret powers with which Nature is invested, and by new combinations produce effects of which the native elements themselves are incapable, but we merely make use of properties already existing, and develop the latent energies innate in their materials. It required the power of a NEWTON and LEIBNITZ to detect many natural laws, but they could only discover, not make laws; the greatest genius that ever lived has not the power to give being to the most remote and insignificant atom; the laws of Nature are strict and immutable, each element perfect in its own sphere, and with its appointed uses. Gold is to be obtained, but it must be by the sinews of labour and the sweat of the brow; to attempt to obtain it from places where it does not exist, either by creation or transmutation, argues, to say the least, great presumption, and arraigns the wisdom of that beneficent and all-wise Being, who created the world for the benefit of all mankind, giving unto us all to use, but nought to abuse.

In our last week's Journal, we briefly noticed the inefficient and uncertain state of our laws as regards the working of mines, and we elucidated our position, by reference to the case of the Duke of BEAUFORT *v.* MORRIS. We are happy to find, that in this important instance the principles we have ever maintained and wish to inculcate, have been during the past week sanctioned by the decision of the Barons of the Exchequer, in granting a new trial, on the ground of the verdict being against evidence. The position of the collieries was clearly explained to the court by means of a model, the Duke of BEAUFORT's Landore Colliery, with its engine, being the lower one, and the Cae Grobos the upper one. It appeared that the new water-course made expressly between them through the Pentre Colliery, from the lower adit to the old stocks of water, computed to equal 18 acres in Cae Grobos, had to be drained by the duke's engine, already sufficiently taxed. In the case, also, of Philpotts *v.* Evers and Another, the plaintiff's mine was on a lower level, and the defendants had caused a hole to be bored through from their mine, in which was a large quantity of water, which inundated the lower one, and caused damages to the extent of 3000*l.*; here, also, the jury nonsuited the plaintiff, but on application for a new trial, Mr. Justice PATTESON expressed his belief that the damage was wilfully done, and the rule was granted. The proceedings of these two important cases will furnish some matter for future observation.

We allude to these cases as referring not only to collieries, but with equal force to copper, tin, and other mines; for if the decision of the Swansea jury was to be taken as law, how glaringly unjust it would be as a precedent, that one party should not only take the advantage of the industry and intelligence of another in the discovery of the position of valuable lodes, but also unfairly avail themselves of their neighbours' power of drainage. We shall watch the progress of these, and any other cases which may arise of similar import as affecting mining property, in order to show the necessity for some decisive legislative interference, to give inexpensive and summary protection to the rights of mining adventure. In the absence of available precedents and equitable rules to guide us in our judgment in bringing these cases before the public, we have commenced, as our readers will perceive, a summary of the Spanish laws, and the recent enactments lately published at Madrid; for, though we may deem ourselves farther advanced in jurisprudence than our neighbours, we think it will be perceived in the perusal of these laws, that their Legislature has clearer views of equity in the important matter of mines than ourselves. This may probably be owing to their re-adoption of those admirable mining ordinances, founded on the experience of a long and very profitable career, and collected in the reign of CHARLES III. by GAMBOA, one of the most accomplished jurists of his time, and a paramount authority in all doubtful mining cases.

Whatever their resources, to enable them to arrive at just conclusions in this species of legislation, our law makers and expounders too often take but a superficial view of these cases, establish precedents which prove eventually seriously injurious to mining adventure, and render uncertain and unsound what should ever be clearly understood by all concerned, and the remedies for injuries inflicted be rendered surely and easily available. To these ordinances of Spain we wish to call the particular attention of our readers, and we shall continue them in each succeeding Journal, as being replete with most important matter bearing on this interesting subject, being a comparison with the civil laws, the old laws of Spain, and the collected laws of the Indies, Mexico, and South America, in reference to cases of moment decided in the respective courts, clearing up many doubtful points, and giving the most complete information on the subject in a legal point of view.

LONDON SLATE TRADE.—There is a considerable demand for roofing slate of the middle sizes and quality—such as the "countess," "viscountess," "wide ladies," and "16 by 8 ladies;" a brisk trade may very soon be expected for slab of a cheap kind. We are informed that a movement is about being made in the City by some influential parties, standing high in the architectural profession, assisted by the patrons to the sanitary reform movement, to pave the streets of the metropolis with a rock slab slate.

COPPER SHEATHING.—We have heard that, for some time past, the Lords Commissioners of the Admiralty have been instituting some very extensive experiments on several sorts of sheathing, not only to test its quality, but its practical utility; one of these has been the sheathing of a vessel with different kinds of copper, which, after certain wear and tear, is to be stripped and weighed, so that it may be discovered which has suffered the greatest deterioration. Two reports have been made from the metal committee to the Lords Commissioners; these have not been published, which we regret, as most probably they contain some information which might be found of general interest.

QUICKSILVER MINES OF SPAIN.—We stated, in last week's Journal, that the *Gaceta de Madrid* of the 12th inst. contained a statement of the conditions of sale of 20,000 quintals of quicksilver now in London, belonging to the Spanish Government, and of all that may be produced from the mines of Almaden, Almadenejos, and any others in the Peninsula, for four years, from the 12th of May, 1849, to the 11th of May, 1853, less the quantities which may be required for mining or chemical purposes in Spain itself. The average annual supply is fixed at 20,000 quintals; and, if it falls short of this, the deficiency is to be made up by the Government after the expiration of the term. The 20,000 quintals in London are to be paid for in one month after the arrangement of the contract. The produce of the mines to be delivered in Seville, in iron bottles, and to be paid for in Madrid, in current coin. The quicksilver to be free from duties of every kind; but the contractors are to place 1000 quintals in Cadiz every year, at cost price, for Spanish merchants who may be sending goods to Mexico in national vessels. A form of tender is appended, which is to be filled up and sent in sealed to the Finance Minister, at whose house, in Madrid, the same will be opened on the 11th of May next, and the highest bidder, beyond the price fixed by the State, will be declared the contractor. No tender will be received without a deposit in the Bank of San Fernando of $100,000, or 9,000,000 *reales de vellon* of 3 per cent. stock, or 18,500,000 of 5 per cent. stock.

MINING LAWS OF SPAIN.

The following Act, relating to mines and the reduction of ores, has just been passed by the Cortes in Spain, and approved by the Queen Isabel II.

CHAPTER I.—OF THE OBJECTS OF MINING.

ART. 1.—Mining has for its especial object the search after inorganic substances, whether metallic, combustible, saline or precious stones, and which may either be found in the earth, or on the surface.

ART. 2.—The property in the substances mentioned in the preceding article belongs to the State, and nobody may avail themselves of them without a grant from the Government, in the form set forth in this Act.

ART. 3.—Earthy mineral productions, such as silicious rocks or building stone, sands, clays, and magnesian earths, and lime and limestone of every kind, shall continue, as before, to be common property, or private property, according to the localities in which they may be found. The working of these substances in private lands shall not be allowed, without the consent of the proprietors. Nevertheless, when these materials are wanted for pottery, the manufacture of porcelain and china, fire bricks, glass-works, or any other branch of manufacture, or for constructions of public interest, authority may be granted by the Government, after previous notice of the same through the chief magistrate, and hearing the proprietor, the engineer of mines, and the provincial council. If the proprietor consents to work them within the term of six months, he shall have the preference; but in the case of constructions of public interest, the Government shall fix the term. In no case shall the working be commenced without having indemnified the proprietor of the land for the value of the same, and a fifth part more, unless he prefers claiming for the damages which may be occasioned. Grants of this nature shall be forfeited whenever the established regulations are not fulfilled. The substances mentioned in this article are not to remain subject to the regulations of this law, in respect to their workings; these, nevertheless, shall be under the cognizance of the civil administration, whenever they are carried on by shafts or levels underground.

CHAP. II.—ON THE WORKING AND GRANT OF MINES.

ART. 4.—Auriferous sands, and any other mineral productions of the rivers and valleys, are free to all, without the necessity of license, or any other formality, provided the operations are not carried on in fixed establishments. This provision is applicable to the collection of iron ores, for the working of which no shafts or levels are required.

ART. 5.—No grant shall be made of a mining pertenencia unless the crop of the vein, or mineral, has been discovered, and proceedings in the prescribed form are heard before the corresponding section of the Royal Council. A title of proprietorship shall be given to the grantees by the Minister of the Department of Mining, in which shall be stated the conditions which, in the opinion of the Government, the peculiar circumstances of the undertaking, or public convenience, require. These conditions shall not be contrary to the general tenor of these regulations. If any condition be resisted by a concern or individual, no grant of that pertenencia shall be made to any other concern, or individual, without the same condition, nor unless the first party gives up his right to the preference, for which purpose he shall be asked. It shall be determined by regulations, when silence is to be considered as abandonment.

ART. 6.—The grants of mining pertenencias are for an unlimited time, whilst the miners fulfil the conditions of this law and those of the grant. They shall also have the power of disposing freely of their produce, subject to the laws. Quicksilver and common salt are excepted, whilst they are monopolized articles, the produce of which is to be delivered into the Government stores, at the price established, or which may be established.

ART. 7.—Every Spaniard, or foreigner, may freely make explorations, or investigations, for the discovery of minerals mentioned in Art. 1, whether they may be in royal, common, or private lands; such operations always to be limited to mere pits, which shall not exceed four varas in width by one in depth. When these pits are dug at a less distance than 50 yards from any building, or in gardens, orchards, vineyards, inclosed or irrigated lands, or in public places, they shall not begin without the permission of the owner, or the representative, and, on his denial, that of the chief magistrate, who shall not give it without a hearing and a report from the provincial council, after inspection by a qualified person. The explorer shall indemnify the owner of the land for the damage which may be in any way occasioned him; and, in default thereof, he shall, as in case of insolvency, be considered a voluntary offender, and liable to the extent of all his legal property.

ART. 8.—If in the space indicated for a pertenencia, two or more shall open pits, the first who discovers ore shall have the preference in the grant of the mine, and the other pits shall be included within the limits. If two or more discover the ore at the same time, and there should be ground enough for the grant of a pertenencia to each of the discoverers, it shall be so granted. When there shall not be room for so doing, all those who first discover the ore shall have equal right, and a pertenencia shall be adjudged to them in common. In all these cases, if the land is private property, the owner shall have the right of joining the discoverers for the tenth part of profits and expenses; this claim is to be made within two months after the discovery is made known.

ART. 9.—When owing to not finding ores in the pits, the explorers wish to continue their trials by means of shafts or levels, they are to ask the permission of the chief magistrate of the province in writing, which shall be entered in a formal registry to be kept for the purpose. He shall not refuse the permission, provided the memorialist properly secures the satisfaction of the damages he may occasion, and the fulfilment of the other obligations stated in the grant. No shafts or levels shall be opened within a radius of 1500 yards from citadels and fortified places, without previous permission of the Minister of War. Neither shall shafts or levels be opened within a radius of 100 varas from towns, without previous license from the Minister of Mines. In villages license to work mines in the intermediate spaces may be granted by the chief magistrate. Wherever shafts or levels have to be opened in the lands specified in the first paragraph of the 7th article, the license and authority mentioned therein is indispensable, if it has not been previously obtained.

ART. 10.—To the first who shall solicit the permission of the chief magistrate to open a shaft or level there shall be reserved, for the term of one year, the ground necessary for a pertenencia, which shall be laid down within three months from the date of the permission. If, during the year, he shall have proceeded with activity, and opened workings of importance, the chief magistrate, after hearing the provincial council, upon previous inspection by the engineer, shall grant an extension for so long a time as the mine may be worked. If the miner should discover ore, he may, on soliciting the grant, alter the course of the pertenencia, provided the ground is free, and is not included in that reserved for any other explorer legally authorised. The owner of the ground in which a vein of ore, discovered by means of a shaft, or level, of more than a yard in depth, has no right of participation in the mine.

ART. 11.—Every mining pertenencia constitutes a solid of a rectangular base of 300 varas in length by 200 varas in width, measured horizontally to the course pointed out by the interested party, and of an undefined depth vertically, without reckoning the surface. No more than two adjoining pertenencias on the same vein are to be granted to one person; nor three to a company of four or more persons. In mines of coal, lignite, or peat, each pertenencia shall have 600 varas of length by 300 varas of width, and four pertenencias may be granted. The discoverer of an unknown vein, bed or deposit, shall have the right to a better grant than those pointed out in the different cases of this article

ART. 12.—The boundary of a mine, which may consist of only one pertenencia, is indivisible. If the original grant comprises two or more pertenencias, these may be separated with the authority of the Government.

ART. 13.—The space between two or more pertenencias, which will not conveniently form another, containing at least a rectangle of two-thirds of the space of an ordinary pertenencia, shall be appropriated as overplus to the adjoining mines, dividing it in proportion to the lines of contact.

[*To be continued in next week's Mining Journal.*]

A NOBLE MINER.—On the 18th February, the inhabitants of Malacca were surprised at beholding the apparition of a Chinese mandarin, superbly dressed, parading the streets, evidently to his own satisfaction, and the admiration of a wondering crowd, who followed close at his heels. On recognising him, he was discovered to be a Chinese, named Liow Ahin, who had been very successfully employed the last few months tin mining on the island. Having realised an ample competence, he had invested $800 in the purchase of an authority from the Emperor of China to wear a mandarin's dress, which entitles the bearer to the rank of nobility.

Original Correspondence.

WONDERS IN LOCOMOTION—NEW MOTIVE POWER.

SIR,—I see, by the last Number of your valuable Journal, that a Mr. Hanssen has volunteered "*to illustrate in plain figures*" that 12 lbs. of pyroxyline, or gun-cotton, will produce no more dynamic power than an equivalent to that of steam generated by 1 lb. of coal. Poor gun-cotton! It has indeed been twisted and turned about, and made to serve the arguments of every party. I really wonder that it does not explode in such cruel hands. Ever since its appearance amongst us, this wonderful ingredient was doomed to be maligned and belied. At one time it was the fashion among a set of public lecturers to represent gun-cotton as something unfathomable for its caprice and murderous propensities—indeed, like some mad bull, or some rearing, kicking, biting, plunging, runaway horse, or, in fact, something that was quite determined to kill every man who had anything to do with it. And now, since it has been demonstrated by experiments and by practice in the British army in India, and by the armies throughout the continent, as well as by your humble servant, that poor pyroxyline, with more strength than hundreds of elephants, is just as tame and as tractable as a lamb, and as docile and obedient as a man's hand chooses to make it, up there jumps another party, and assures the public, with a serious face, that gun-cotton has now taken it into its capricious head to be just like "*the donkey wot won't go*," and that, indeed, a little bit of coal, not bigger than a young cabbage, or a baby's fist, has been found to be just as powerful in its dynamic effects as a large heap of gun-cotton—yea, though that heap be no less than 12 lbs. in weight; and these generous informants (for they do take all this trouble to instruct the public gratis, and have no private views in the back-ground)—these generous informants, I say—undertake to prove their assertions "*in plain figures*"—nay, more, they ground them on my own explanations of the matter.

Now, in writing my first explanation of the pyroxyline engine, I did not wish to fill up the columns of your valuable Journal with a long lecture on the theory of explosive forces. I had every reason to hope that persons like Mr. Hanssen would have understood, at the very first sight, that where there is an analysis of matter after combustion or explosion, and carbonic oxide and carbonic acid gas are mentioned, these two gases are mere residuary gases—products of other more active gases, and which would stand in relation to exploded pyroxyline, as the same gases, and even ashes, would stand in relation to coal, or any other piece of fuel that had been consumed by fire, or as blown-off waste steam would stand in relation to the high-pressure steam in the boiler, only with this difference, that the gases of pyroxyline are, on account of their permanent elasticity, a great deal more useful. Now the passage in my letter upon which Mr. Hanssen has taken his stand, runs thus: speaking of the patented ingredient, I continue—"*We obtain from it no less a pressure than that of forty-six tons* upon the square inch of surface. The gases evolved consist chiefly of carbonic oxide, and carbonic acid gas, both gases permanently elastic, so that, passing through cold air or water, they do not collapse, but will follow up the piston to the utmost limit of its work." Now, I venture to say that no tyro in the rudiments of chemistry could have jumped at the conclusion that the mere residuary gases in the receiver were expected to xert the enormous pressure of 46 tons upon the square inch; just as little s we should attribute to the ashes of the grate the merit of having boiled, roasted, fried, stewed, toasted, frizzled, and fricaseed all sorts of delicacies, and warmed the rooms in addition.

As the modern engineers are versed in the attributes of steam, which does collapse in the cold atmosphere, I thought it fit to remind them that even the residuary gases of pyroxyline do not collapse like steam, but that they constitute additional, or auxiliary, powers in impelling the piston to the utmost limits of its work, after the principal part of the task had been performed by the chief gases during their extrication and expansion by heat, so that the carbonic acid gas and carbonic oxide were meant to be taken at their own natural value, and not to be mistaken for the *main source of power*, which is in itself of a most gigantic nature. Mr. Hanssen has chosen, however, to waive the main points of the question, and to sum up "in plain figures" the mere available power to be derived from residuary gases—in fact,

> Instead of catching the gigantic whale,
> The man is only nibbling at its tail.

Now, however, after seeing that even such gross mistakes are not impossible, an exposition of the following simple and intelligible doctrine on the nature of explosive forces, imparted to me by my tutor at a very early age, may not be quite out of place:—"Now then, you must know, my little lad (said my tutor, speaking of gunpowder), that the explosive force of gunpowder is caused merely by the air being excited to action, and then expanded by fire, in the following manner:—The nitre yields by heat a considerable quantity of oxygen gas, the charcoal yields by heat a considerable quantity of hydrogen gas; the fire of the match, which is employed to inflame the gunpowder, extricates those two airs, or gases, and, at the very time of their extrication, sets fire to *the sulphur, and the flame of the sulphur explodes those two gases.* The volatilised airs from gunpowder acquire 244 times as much space as what they occupied during their quiescent state in the powder. The space to which they are again expanded by the heat of the flame is about four times as much more, so that the force, or pressure, of the gases emanating from fixed gunpowder is about 1000 times greater than the pressure of the atmospheric air, which, as you know, my little man, is equal to 14¾ lbs. every square inch. Thus, then, the pressure, or force, of exploded gunpowder upon the same is equal (speaking in round numbers) to 14,000 lbs. The gases that are left behind after the detonation of gunpowder, and which are called residuary gases, consist chiefly of nitrogen and carbonic acid gas."

Extravagant as the above calculations might have appeared to me at the time when they were first put before me, I have since found them to be very far under the mark; for, by Hutton's 10th edition, vol ii., p. 141, we see that in 1831 the strength of gunpowder was supposed to be 1800 times, and subsequent experiments show that it is no less than 2000 times stronger than the atmospheric air.

Now that the gun-cotton has been proved to be 3½ times stronger than gunpowder, there is no difficulty in the way of getting at its real power; and all I have done with the intense gases of pyroxyline is what I would advise my friends to do if they found their grog too strong for their palates—that is, to dilute it to the strength at which they found they could bear and enjoy it. By generating from pyroxyline very small quantities of such gases under a receiver of metal, or, what is still better, under a globe of vulcanised India-rubber ⅜ in. thick; and by allowing those gases room to expand there, and to assume, instead of a percussive force, a more gentle dynamic power, their gigantic energies become highly useful and economical. But we must not permit those gases to cool, for in that case we would find only the residuary gases left to us.

Finally, I will venture to assert, that instead of competing with 212 feet of steam that might be generated by 1 lb. of coal, very little more than 12 lbs. of pyroxyline will drive a man, in a small carriage similar to one of the velocipedes, to Manchester, as may be seen from the following brief calculation:—

Let us put down the weight of the traveller at about 168 lbs.; that of his carriage, luggage, &c., 314 lbs.—total, 500 lbs. Now, if the carriage start at the crank with a power of 112 lbs., and if the wheel goes through two-thirds more space than the crank, it will leave at the periphery of the wheel about 37 lbs., which are quite equal to the weight of man and carriage; for, it is generally considered that one ton's weight can be driven by one horse power, or 150 lbs. Thus a cylinder, not larger than ⅛th and $\frac{1}{10}$th of an inch in diameter, would give us a power on the crank equal to the weight of carriage and burden. But as such very small machinery might be objected to, let us rather reduce the pressure of the gases from 37 lbs. to 4½ lbs., and let us compensate this reduction in the gases by making the piston of about 2 in. diameter. Now, let us presume that the gases, immediately on the extrication from one cubic inch of pyroxyline, weighing 55 grains, are received in a vessel, where they found room enough to retain their full expansion, thus exerting only a pressure of 1 lb. per square inch above the pressure of the atmospheric air, those gases will in that case be equivalent to 103,250 lbs., and lie in a space of 103,250 cubic inches. Now, let us bring those gases into a condensed form and into a smaller compass, so that they might exert, for example, a pressure of 4½ lbs. upon the square inch, and they will then be equal to 19,362 jets of gas at 4½ lbs. pressure, and furnish us with 523½ jets of power at 37 lbs.—so that, by the aid of every one of these jets, we obtain one complete revolution of the crank. Hence, 1 cubic inch of pyroxyline, weighing 55 grs., yields sufficient power to produce 523½ revolutions of the crank.

Now, suppose the driving wheel attached to the axle of the crank is 3 ft. in diameter, or, in other words, 3 yards in circumference, it will then, at each revolution, cover 3 yards of ground—thus every cubic inch of pyroxyline will send forward the carriage 1750 yards. The distance between London and Manchester being, I believe, 200 miles, or 352,000 yds., we shall at that rate require (reckoning, however, in an extravagant manner) 2240 cubic inches, or 17½ lbs. of pyroxyline for the whole journey; and as the making of pyroxyline comes to 8d. the pound, the cost of the journey between London and Manchester will be 11s. 8d., or something less than THREE HALFPENCE per mile on the common roads; but if we employ it on the rails (which certainly do reduce the friction enormously, though also at a most enormous cost), the pyroxyline locomotives will perform their work at an infinitely less expense per mile—indeed, very likely at ¼th of a farthing per mile.

To this advantage we must add the preservation of the locomotives, which will not be so burned and corroded as they are now by the agency of the fire; and, finally, we must add the waste of fuel and steam, which the engineers never put down among the items in their calculations of the cost of steam power, but which is immense, previous to the bringing the steam up to its working point, and in wasting it again, after a certain quantity of work had been effected, &c., &c.—none of this waste will occur in the employment of pyroxyline as a source of motive-power.

London, April 21. ADOLPH COUNT DE WERDINSKY.

THE NEW IMPULSIVE POWER.

SIR,—I know not whether Count de Werdinsky is the same individual who, about two years since, consulted Dr. Ure about a patent for the propulsion of machinery by the gases emanating from ignited gun-cotton; if so, it was with the gun-cotton prepared by myself that the necessary experiments were made. It is not my wish to discourage any attempt at *improvements of any kind*, nor to write for the *sake of criticism*, but the count appears to err in his statement of the gases in question; he states that they are simply carbonic acid and carbonic oxide. Having mentioned in his letter the manufacture of the cotton, and that *nitric acid* is used (the sulphuric acid having no other effect than to dehydrate, or abstract, the moisture inherent in the nitric acid, thus leaving it free to act on the cotton), what, then, let me ask, becomes of the *nitrogen*?

If the count will only institute one or two simple experiments, he will find that *nitrous acid gas* is generated, the which powerfully corrodes metals; for instance, place some cotton on a piece of litmus paper, and ignite it, the *colour will be discharged.* Again, fire it from a gun, and leave it in the air awhile; the barrel will be found *much rusted*, and, in course of time, would become *absolutely dangerous* to use. It was on this ground that parties at the Ordnance Department discarded it. J. HORSLEY.

Ryde, April 23.

THE GUN-COTTON ENGINE.

SIR,—The future historian may write that the folly of the age in which we live is the love of invention, or the desire to bring forth some hidden property of matter, or fresh principle, which, by oxidation, combustion, or other fangle, may become an active agent, subservient to man and relieving the species, as well as the brute, from the daily penalty of labour, which would abridge the comfort, if not the period, of their terrestrial warfare. No inquiry can be of greater interest in this philanthropic age wherein concealed mysteries are being rapidly unfolded, and traced to the great first cause, coeval with the beginning of time when all matter was confusion and chaos; but nothing so much operates as a check on man's natural ardour for invention, or cools the pure love inherent in the species for new discoveries, as the circulation of misstatements in defining, or elucidating principles; and as a counteraction to which, I take leave to correct the estimate of Mr. Hanssen, C.E., in this day's *Mining Journal*, as to the expansibility of gas from increased temperature, not doubting but as much folly will be shown on his part to stay the progress of the gun-cotton engine, as the most ardent patron of the invention could desire.

Chemical philosophers have to a man agreed to what never needed a doubt—that steam and gas are subject to one law as to their expansibility from increased temperature. By the imposing and elaborate series of experiments of the Academy of Sciences of Paris, conducted at the instance, and with all the munificence of a Government devoted to the prosperity of its people, it was found that when steam, of the temperature of 212° Fahr., is of the pressure of *one* atmosphere, at 398·5°, it is of the pressure of *sixteen* atmospheres. Therefore, gas occupying 10·5 cubic feet, at 212°, would, at 400°, fill somewhat more than (10·5 × 16 =) 168 ft., and be of the pressure of one atmosphere—whereas Mr. Hanssen, like most mechanical philosophers, mistaking the numerals of Fahrenheit's scale for true measures of relative temperature, has reckoned the space at only 18 cubic feet, which error being corrected by the substitution of 168, and supposing his estimate were in every other respect exact, the comparison he has made between coal and gun-cotton should read thus—1 lb. of coal = 1·4 lb. of gun-cotton, instead of 12.

We have not the data on which Mr. Hanssen has made it appear that a pound of gun-cotton will yield 10·5 cubic feet of gas; nevertheless, it is plain he has assumed—first, the quantities of carbonic oxide and acid gas evolved by the combustion of gun-cotton to be *equal*—whereas, by Count de Werdinsky, it appears the *greater portion* is carbonic oxide gas. Next, he has assumed that equal quantities of the two gases being mixed, the specific gravity of the volume will be a mean between their respective gravities when unmixed—an assumption which is a folly peculiar to the age we live in, but which will not be proved until equal quantities of water and alcohol, and the same of large and small shot, when blended and put in one measure, their respective volumes, after being mixed, shall be found equal to the sum of their separate volumes.

Mr. Hanssen has fallen into another grave mistake in giving the specific gravity of carbonic oxide at 1527, and of carbonic acid at 972—thus giving the greater density to that gas of which the quantity evolved is the greatest, and, amongst so many mistakes, ignorant people will survey the purity of his motives, as his errors are all on one side of the question, misplacing the specific gravities of one gas for the other, so as to be most detrimental to the invention he pretends to illustrate; but such mistakes are in such constant use as need not raise a suspicion of their having been designed, or that the writer was possessed of the motive of running down an invention which, by possibility may, for some purpose or other, serve a good turn as a motive-power.

Mr. Hanssen's paper, as a whole, will reflect little credit on the body who have dubbed him civil engineer, and common mechanics like myself may doubt whether those props are the reward of well-timed labour and perseverance, or conferred as a boon by the body corporate on one of its rising branches, of which the core of the parent tree is already rotten. Of the value of the invention I know nothing, nor have I the data requisite to hazard judgment, but, from general description, it seems rather deserving an impartial investigation than to be turned adrift without a hearing.

Whether the count's description of the ruinous consequences of railways be *literally* correct is not my province to say, but all the world knows that immense capital has been diverted from its usual course, and laid fast on railways, without adequate return. The money expended, although on home-grown material and labour, is in some degree unproductive, so that England is now reaping the sorrowful harvest of her own folly and wanton expenditure on the rail—the principle of motion on which, according to their own showing, engineers are yet deficient, either of time or talent, to investigate and understand.—JOHN CURR: *Upper Penton-street, April* 21.

THE XYLOIDINE ENGINE.

SIR,—It appears evident to me, from the communication of Mr. C. J. Hanssen, C.E., in your last Number, that he has not had chemical experience sufficient to enable him correctly to criticise the principles of the gun-cotton engine described by the Count de Werdinsky; nor are the details given by the count himself in accordance with scientific phenomena. He asserts that xyloidine (which, by-the-bye, may not be identical with gun-cotton) becomes, by ignition, resolved into carbonic acid and carbonic oxide. So far correct; but why does he not specify what has become of the other elements—the hydrogen of the vegetable fibrine, and the azote imparted by the nitric acid, in its preparation? The component parts of cotton are 12 of carbon, 10 of hydrogen, and 10 of oxygen, to which is superadded, by corpuscular intercolation, two equivalents of azote—the two corresponding elements of oxygen combining with one of carbon in the cotton; so that gun-cotton really consists of 12 carbon + 12 oxygen + 10 hydrogen, and 2 of nitrogen, otherwise *azoton*—the elementary body (*nitrogen*) being a substance analogous to carbon and boron. Now, as the carbon amounts to 73·44, the oxygen to 96, the hydrogen to 10, and the azoton to 28·33 parts by weight (207¾ lbs. say), 208 lbs. of gun-cotton will contain 1900 cubic feet of hydrogen, 1140 of oxygen, 380 of azoton, and 2275 cubic feet of carbon vapour. On the supposition that no subsidiary combination of these nascent elements occurred, the total volume of expansion would be 5695 cubic feet of gaseous matter, from 10 cubic feet of cotton, pressed to the greatest compactness consistent with safety; but two elements of azoton combine with four of carbon, yielding 380 feet of bicarburet of azoton. The 12 of oxygen takes 6 of carbon, yielding 1138 feet of carbonic acid; whilst the remaining two of carbon combine with four of hydrogen, resulting in 380 feet of marsh gas—leaving the residual six of hydrogen quite unaccounted for, equivalent to 1140 cubic feet; so that, at 60° Fahrenheit, the resultant volume of ignited gun-cotton is actually 3040 cubic feet, from 10 cubic feet of prime volume, equivalent to 304 atmospheres.

Now, the use of gun-cotton was distinguished, at the battle of Moultan, by the superior intensity of its flash, as compared with gunpowder, and the ignition of the latter will melt fine copper wire whose fusing point is 1950° Fahr.; the temperature of ignition of gun-cotton must be at least 2500° Fahr., equivalent in expansive influence, according to the data of Rudberg, to six times, or 1824 atmospheres. On the supposition that the result of its ignition is only carbonic acid and carbonic oxide, in the proportions assigned by your correspondent—viz.: 18 cubic feet, and that 1 lb. of gun-cotton compressed is equal to the 1-20th of a cubic foot, the expansion would be 18 × 20 = 360 atmospheres. From the erroneous data laid down by your correspondents, we are taught how unadvisable it is for parties, however theoretically they may think they understand chemical subjects, to advance opinions which are so totally at variance with absolute and well authenticated practical facts, and upon which a little inquiry would have set them right.—W. RADLEY, Ch.E.: *Walworth, April* 23.

WATERING STREETS—EXTINGUISHING FIRES.

SIR,—In the last Number of your Journal, Count de Werdinsky suggests a plan for rendering stationary and ready to hand the means of extinguishing fires and watering streets, by attaching watering hose to lamp-posts, made large enough to allow of its being coiled within-side. But this is not the first time such a system has been put forward, and Count de Werdinsky will find, by consulting the Chancery records, that the patent of Stephen Geary, for "certain improvements in the machinery, apparatus, and arrangements for the supply and distribution of water for private and public uses, but more particularly in cases of fire," dated Nov. 7th, 1844, comprises the same system, and points out the different arrangements necessary to carry it into practice. Why the plan has never been adopted appears strange, as there seems to be no valid objection to it. The circumstance of Count de Werdinsky having hit upon the same plan as Mr. Geary, illustrates the not uncommon concurrence of ideas that occurs amongst ingenious men, and shows the absolute necessity that exists for the arrangement of the patent records under such a system that the doings of others may be ascertained without difficulty, though it be true that an application to the patent agent will generally solve the problem.—F. W. CAMPIN: 210, *Strand, April* 27.

IRON STEAM-SHIPS AS VESSELS OF WAR.

SIR,—As a constant reader of your valuable paper, and a member of the mechanical body, I shall feel obliged by your permitting me a small space in your Journal, for the purpose of endeavouring to set your correspondent, Mr. John De la Haye, right, with regard to some statements which he makes in your last week's publication. The opinion expressed by Mr. John De la Haye is only that of the public in general; but, although such be the case, in my own it is anything but correct. I allude to that part of his communication where he, in noticing the discoveries of Adolph Count de Werdinsky, says, "steam-vessels have been condemned by all proficients in the art (war), iron vessels ditto." Is Mr. John De la Haye fully aware that such is really the fact? I think not. Fortunately for our country, and the saving of human life since the general introduction of steam in our navy, the occasions have been few, and the extent of the operations small, for testing their capabilities; wherever they have been tried, however (China for instance), I think steamers have merited anything but the character Mr. John De la Haye seems to attach to them. As regards vessels of iron, *when properly constructed, for the purposes of war*, there are no *established* facts on record proving their unsuitableness. If Mr. John De la Haye refers to the experiments (if such schoolboy play ought to be so designated) made at Portsmouth, by placing the small *Ruby* steamer under the point blank shot of the *Excellent's* guns, as being a test of the unfitness of iron vessels for the purposes of war, I can only assure him, that a more ridiculous trial never was attempted on any mechanical or scientific subject. I need only state, that the thickness of the sheets covering the craft in question was only about ⅛-inch, and her frames not more than 2-inch angle iron, and nearly 2 feet apart!! I think no comment on this trial need be made to Mr. John De la Haye. The only real test of the fitness of iron vessels for war purposes has been in China and the Rio de la Plata, and with apparently different results; in the former case nothing can be more satisfactory than the accounts from the *Nemesis* and *Phlegethon*, as noticed in a letter from Mr. Laird to the Editor of the *Times* lately; in the latter case the account was different, and you yourself, Mr. Editor, at that time seemed to harbour a like opinion with Mr. John De la Haye. I believe you were not aware, however, that these vessels in the Plate were *not* intended to withstand shot, or, if they were, it was an egregious error on the part of those who prepared the specification, or the party who constructed them, as neither the framing or plating were of proper sections for war vessels, being as light in these respects as those of a like tonnage in the mercantile packet service. The strengths of iron and wood are now, as a material, equally well ascertained, and the momentum of a ball of any given weight and velocity can be readily calculated, from which data can be arrived at, so as to enable a mechanic to dispose of his materials in such a manner as to entirely *resist* shot. This can readily be effected by a network framing of iron, placed edgeways to the direction of the shot. When the foolish—I beg their pardon, *hasty*—conclusion of the inadmissibility of iron as a shipbuilding material was first promulgated, the Lords of the Admiralty suspended the operations on the various iron vessels ordered by their predecessors in office.

I, as a friend to every improvement in our arts and manufactures, wrote to their lordships, detailing the particulars of the experiments before named, and offering the drawings and specification of an iron vessel, or even the vessel itself, which I would guarantee to be incapable of being penetrated by shot, under the ordinary way in which vessels of war are exposed. Their lordships, through their secretary, Mr. Ward, returned a very gracious answer, intimating their wish to receive the drawings and specification of a steam-frigate possessing the qualities I named. I prepared the said documents at once, and forwarded them to the Admiralty; but, beyond the acknowledgement of their reception, I have heard nothing further directly from their lordships. I ascertained, however, that very soon afterwards they countermanded their former instructions with regard to iron vessels, and ordered them to be proceeded with at once. How far the humble efforts of your obedient servant may have aided this "consummation so devoutly to be wished" is as great a mystery to the writer as many other wonderful acts of their lordships are to the generality of mankind. I have been thus prolix from a desire to set Mr. J. De la Haye right, in regard to the unfitness of iron vessels for the purposes of war never having been as yet fairly tested; and he is, I hope, too much of a philosopher to persist in an error, or rather an opinion, as yet unsupported by facts.—J. H. S. C.: *Newcastle-on-Tyne, April* 24.

VENTILATION OF MINES.

SIR,—Amongst the various plans which have been employed, or suggested, for the ventilation of mines, it appears that there are none but what are liable to *some* objection. The furnace in my estimation, under the best of circumstances, will "but very inadequately fulfil its object." The cowl, although it may be of service on certain occasions, must evidently be "perfectly useless in a calm," and, therefore, where human life is at stake, ought never to be employed, except as an *assistant* ventilator; the principle of ventilation by means of jets of high-pressure steam, on account of its simplicity and freedom from machinery, appears to have the greatest number of adherents. That it would be an *economical* mode of producing mechanical effect—*i. e.*, so far as the consumption of steam is concerned—no one has ventured to assert, or attempted to prove; and it has likewise one serious defect—viz., that "to be efficacious, the ventilating shaft must be used *solely* for that purpose;" and the same objection applies, though not perhaps with equal force, to the fan or the air-pump, unless they were employed to force the air *into*, instead of extracting it *from*, the mine. One disadvantage connected with the latter plan is, that if worked by a crank, as proposed by Mr. Struvé, the velocity of the air, instead of being uniform, would be alternately accelerated and retarded, which, for various reasons, is objectionable. However, it is my opinion that either the fan, or the air-pump, would prove more efficacious, and in the end more economical, than high-pressure steam. There is, however, another mode of effecting the ventilation of mines, which probably might be found superior to either of the above plans. The principle is that of the scre#,

or a series of inclined planes, made to revolve at a sufficient velocity to produce the necessary ventilation. One advantage which the screw ventilator would possess over all other plans is, that without any previous preparation, it is capable of being instantly reversed, or transformed, from an extractor into an injector of air, by which means the disadvantage of using the ventilating shaft exclusively for that purpose would be entirely avoided, as the screw could be worked in either direction as circumstances might determine. Whether the principle of *injection* would prove so efficacious as that of *extraction* I am not prepared to say; but still I am of opinion that the difference would be but trifling. However, as either or all of these plans could be *practically* tested at an expense altogether insignificant, compared with the vast importance of the subject, I shall not occupy your valuable space with any further theoretical speculations on the various plans of ventilation; but will conclude these few observations by expressing my full concurrence with your own and the opinion of many of your talented correspondents, regarding the urgent necessity of legislative interference on this most important subject.

April 25. AN ENGINEER OF THE NEXT GENERATION.

VENTILATION OF MINES.

SIR,—"Lusor," in his letter to you of the 30th March, seems to have created a laugh for himself, by misquoting my letters on the ventilation of mines; and if that gentleman will further amuse himself by reperusing them, he will find that I do not even attempt to claim the discoveries there mentioned for any individual. With respect to the mine ventilator patented by Mr. Struvé, it is admitted on all sides to have been long in regular use.

As to the ventilation of mines by withdrawing the foul air with a fan, I stated my having read a paper, five years back, by Mr. Furness, of Leeds, who had patented and used the invention many years prior to the reading of the paper in question. The patent, if I remember rightly, was principally for an improved construction in the fan he used, and also embraced *the application of high-pressure steam* (as now proposed by Mr. Gurney) *as a contingent power in case of any accident occurring to the machinery.*

It is clear our inventive powers have, for a considerable length of time, been at a stand still, and that all the RECENT IMPROVEMENTS called out by the late dreadful explosion at Darley Main have, in fact, been known and partially practised for many years; by which it is plain that nothing short of the interference of Government may be looked forward to in remedying the present existing evil. HENRY HARTOP.

Barnborough Hall, Rotherham, April 26.

P.S. If any person will take the trouble to examine your valuable Journal for the last few years, it will be found that very good and practicable means of ventilation, safety-lamps, anemometers, &c., have been long but too partially in use.

MINE VENTILATION.

SIR,—The South Shields Committee, as well as some of your correspondents, have objected to the use of any description of machinery in mine ventilation, because it may be liable to derangement, and interrupted in its operation by accidents. Yet they have advocated the employment of high-pressure steam as not being exposed to similar contingencies, and as if such disastrous casualties as boiler explosions had never happened, or fires had not been extinguished by leakage, or the production of steam had never suddenly ceased from the many other accidents to which high-pressure boilers are peculiarly liable. If the boiler be placed underground, its liability to accident must necessarily be increased, from the difficulty there will be in exercising the needful vigilance to maintain it in an efficient state; and when it is considered that the requisite pressure of the steam is from 50 to 60 lbs. on the square inch, it would be inconsistent with experience to anticipate that boiler accidents will never happen, and that serious interruptions to the ventilation will not occur in consequence. Freely admitting the proved superiority of steam as compared with the furnace, and that it is probable the number of casualties may be very considerably diminished by its being used in mine ventilation, yet it must be borne in mind that accidents may still occur, and that when such do unfortunately happen, to the calamities incident on a boiler explosion, must be added the terrible devastation of an explosion of fire-damp.

As compared with mechanical means, high-pressure steam, therefore, possesses no superior exemption from accident; whilst from the position of the boiler, the evil consequences of such casualties will be very considerably increased. When the means of ventilation are on the surface, and not placed in the mine, they are less exposed to interruption in cases where fire-damp explosions do occur, when it is most needful they should be in full operation. Should any derangement occur in the machinery, so as to impede, or stop, the ventilation, the men may be immediately withdrawn from the mine until the damages are repaired; or duplicate machines may be resorted to, so that if an accident happens with one, recourse may be had to the other.

The ventilation produced by mechanical means has been proved to be quite equal, at least, to that effected by high-pressure steam, and it is undoubtedly more economical; whilst the objections urged against it apply with greater force to the latter, although neither these or any other means yet discovered are so perfect as to accomplish all that is desired, or to render still greater improvements in mine ventilation unnecessary.

Neath, April 24. J. RICHARDSON, C.E.

VENTILATION BY HIGH-PRESSURE STEAM, AND ON THE VENTILATION OF SEATON DELAVAL COLLIERY.

SIR,—I respond to the letter of "King Coal," which appeared in your valuable Journal the week before last. I did not receive my correspondent's letter from the north in sufficient time to enable me to reply in due course. "King Coal" appears to have the double purpose in view—viz.: of bolstering up ventilation by high-pressure steam, and of advocating or defending the method of ventilation as pursued at Seaton Delaval Colliery in Northumberland, and as enunciated in your columns by its viewer, Mr. T. E. Forster, of Newcastle-upon-Tyne, a few weeks ago. In my former letter I deprecated both systems—I do so still; the more I hear of the former the more I am convinced that, as an economical agent for producing ventilation, it is utterly worthless, and of Mr. Forster's method of ventilating Seaton Delaval Colliery, with his four downcast and two upcast shafts, I cannot sufficiently deprecate it.

It appears, according to the letter from Mr. Dunn, of Newcastle, that in the application of high-pressure steam as a means of ventilation, the jets have to be applied a few feet below the top of the upcast shaft—that is, a few feet from where the ascending current makes its escape into the atmosphere; this, I presume, is to avoid the evils consequent on condensation. Now, independent of the principle *per se*, sought to be established here, and which is of a very questionable character, with such an elastic fluid as air, I proceed at once to inquire into the expense attending this method of effecting the simple object of inducing a current of air through the workings of a coal mine. In the first place, the shaft at which the steam ventilator is applied cannot be appropriated to any other purpose; it cannot be applied in drawing coals, and a water shaft is not adapted for an upcast; unless, indeed, with a complex arrangement of valves or doors, the practical operation of which is very problematical, and which can only be effected at a heavy daily expense—indeed, where work to any extent is to be drawn, it is absolutely impossible. A boiler, water pumping apparatus, chimney, &c., is required, compared to which the cost of a furnace at the bottom of an upcast shaft is trifling, and which leaves the shaft available for coal work. Again, a steam-engine will be necessary for the purpose of supplying the boiler with water; the steam being probably generated at 40 lbs. to the square in., the idea of the attendant pumping water into the boiler under the pressure of steam is preposterous. Were this to be attempted, I hesitate not to say that for several hours out of the 24, especially during the night, that the high-pressure character of the affair would be of the most evanescent nature—indeed, it is highly probable that the boiler would occasionally take flight; unquestionably, heavy repairs would frequently be necessary. The jet apparatus and fixing in the shaft is also a very expensive item in the outset; the refuse coal of the mine will do for a ventilating furnace, I should like much to know what quantity of high-pressure steam at 40 lbs. to the inch the refuse coal of the mine will generate. In short, it is as complex and expensive a crotchet as ever entered into the mind of a practical viewer; commercially it is impracticable, and for the purpose of ventilation it is similar to purchasing a guinea at four or five times its intrinsic value.

I shall now advert to the origin of its application at Seaton Delaval Colliery. The viewer of this mine, Mr. Forster, in his letter, under date December last, states—"About the middle of this year, whilst in London, I attended a lecture at the Polytechnic Institution, in Regent-street, on a jet of steam, in which the lecturer proved, by the experiments he made, the benefits to be derived in ventilation by high-pressure steam. So convinced was I," &c., &c., that it was put into operation at Seaton Delaval Colliery, at which mine it is stated there are four downcast and two upcast shafts, the clear area of the downcast shafts 150 superficial feet; the two upcast shafts are 8 and 9 ft. diameter respectively, area 113 feet—it is not stated whether the 113 feet is clear area or not; air circulating previous to the erection of the steam apparatus 53,058 cubic feet per minute; after its application, 79,359 cubic feet, or about 50 per cent. increase. Carburetted hydrogen gas was occasionally seen at the edge of the goaves previous to the application of the steam apparatus.

Now, if I admit the statement respecting the quantity of air circulating through the mine to be correct (and this is the exception to the rule we adopt here with respect to statements generally by the northern coal viewers), I ask, what does this prove?

If 2 fur. : 53,058 ft. of air :: 2 fur. + 1 steam jet apparatus=79,587 cubic feet of air.

It proves that the application of the steam jet apparatus is not equivalent to the application of another furnace, for be it understood that the two ventilating furnaces were in operation when this statement was made—then what, I ask, becomes of this boasted principle? It is fallacious on the face of it! But I can well predict what will now take place; we shall have a monstrous statement (*alias* misstatement) from "King Coal," or some other equally veracious king, of the amount of induced circulation by steam jets alone; but let him beware, and see that his statement bears the impress of truth, or I shall most unquestionably have again to advert to the subject. My letter from the north states that "Seaton Delaval Colliery has, probably been nine years at work; the present manager has had the direction of it for about half that period; there are three pairs of pits of small capacity and an engine-pit; there is nothing underground to prevent an additional upcast shaft being applied, it would give a great additional circulation of air; all that is necessary is a furnace at the bottom of one of the shafts, the current of air could be changed at the end of any week; two upcast shafts would be sufficient in the early stage of the colliery workings, but three are imperatively required from the extended workings." Pray contrast this with the letter of "King Coal," who says—"For the information of 'Carbon' ["Carbon" has more pits under his direction than what "King Coal" dreams of in his philosophy], it cannot be determined in the outset which shafts are to be upcasts, and that the violation of the principle cannot be preferred against the present manager of Seaton Delaval Colliery, inasmuch as the upcast shafts were made long before he was officially identified with the establishment." A word of comment upon this quiet jesuistical production would be superfluous. "King Coal," simple though Seaton Delaval Colliery may be, do not forget the fire flitting about the goaves.

In conclusion, we so seldom get a Newcastle coal pit viewer on paper, that a parting observation respecting the steam-jet apparatus at Seaton Delaval Colliery will be indispensable. At a meeting of a few professional men, held here a fortnight ago, we had Mr. Forster's "*drawing of the steam apparatus with the necessary references*" before us. I can assure you, Mr. Editor, that it is a production of value; for I hold in these bad times it is worth something to get a good laugh; the diagram was voted a perfect gem in its way, a genuine *rara avis in terris*. The meeting was unanimously of opinion that it would form the basis of a new system of mechanical drawing, being neither plan, section, nor elevation, and to us, the unenlightened, perfectly incomprehensible.

Manchester, April 23. CARBON.

P.S. We have an idea here that there has been a good deal of angling lately in the north for Government inspectorships. We have to observe that, if the Legislature do appoint inspectors of mines, we shall most determinedly oppose the infliction of any northerns upon us; there are several professional men here who like a good *job*, and, if the northerns will only attend to their own district, they will find plenty of employment in their own ill-managed mines.

MINING INDUSTRY IN AUSTRIA.

SIR,—In a very able article on the "Prospects of Mining Industry," published in your last week's Journal, a statement occurs of the following tenor:—"Some idea may be formed of the condition of industry in Austria, when it is known that, in spite of the show of learning in the immense mining establishments of the Government, the copper produced is not sufficiently pure to be used by wiredrawers. Foreign copper has always been used for that purpose, on which duties have been imposed, to protect the negligence of the Government officials."

I am afraid that your correspondent, in his ardent admiration of the Hungarians, and undisguised contempt of the Austrians, has allowed his enthusiastic liberal feelings to carry him a little beyond the verge of truth. I by no means accuse him of misstating anything wilfully, but of labouring under a misconception, when he states that the copper produced in the Austrian states is not sufficiently pure for the manufacture of wire. The copper establishments of the Austrian empire are comparatively small, and the copper they produce there finds a ready market in the country at a high remunerative price, as black copper, which is sufficiently pure for alloys and general manufacture, such as brass, &c. The generality of the Austrian mining officials are as well educated as those of Saxony and Hanover, and their chemical superiority over the English mining and smelting community is well known. The Austrian and Prussian—in fact, nearly all the German states—find they can import tough cake copper for sheathing, bolts, &c., from England cheaper than they can make it themselves (we having such an immense advantage over them in the way of fuel); while the rosette copper (gahr kupfer), manufactured in their own country, which is 7 to 8 per cent. inferior to the English, finds a more profitable sale (being frequently sold at a higher price) among the small manufacturers, who prefer it to the massive cake imported from England, on account of its small size and great frangibility. As these establishments are enabled to sell an inferior article at a higher price than they purchase a superior, it is a matter of policy for them not to improve, but to suit their manufacture to their customers. In doing this, I think that they should not be unjustly accused of ignorance or negligence. Protectionists as the Austrians in general are, here they are practising the great "free trade axiom" of buying in the cheapest market, and selling in the dearest.—C.: *Paddington, April* 23.

COPPER SHEATHING.

SIR,—I am glad to see that Mr. Prideaux has again commenced the initiative on this important question through the medium of your columns and I trust this time the discussion will be carried on by both chemist and smelter, until some practical and useful result is arrived at. I do not think that this is a question of pecuniary remuneration to either party, but a general benefit to the community at large, and of importance to science in particular. When it is considered the immense sums yearly paid both by Government and private individuals for new copper, to be employed in sheathing, which must materially increase the expenditure, any method by which this may be lessened must be of incalculable benefit to all parties. Every discoverer of any new invention, or improvement, is, no doubt, justly entitled to reap the reward of his exertions, but the truth can only be attained by free and unlimited discusssion. If any portion of his experience, or knowledge, is withheld by an interested individual taking part in the argument, he but mystifies it by his semi-admissions, and tends still further to increase the mysterious gloom in which the question is enveloped. There is no doubt that many important inventions have been discovered, and which have expired with their projectors, through a jealous feeling of the majority being participators in the benefits to be derived from them. Many are so sensitive, that they are afraid of introducing an argument which may be easily refuted; and others are so sanguine that, if controverted, they imagine it arises from envy or ignorance. Nothing more irritates a sanguine theorist, who is building castles in the air, than the friendly admonition that he is walking into a pit.

The communications of Mr. Prideaux have hitherto been written in a spirit to invite discussion and elicit truth; and, to my thinking, to others' mites he has cheerfully contributed the results of his great experience and scientific knowledge, and I trust that he will still continue in the same course, nor allow his ardour to be damped by any coolness on the part of the smelters to renew the argument; at the same time, I have no doubt that this important body, seeing how beneficial a correct approximation to the truth will be to their interests, will cheerfully join with their practical knowledge in endeavouring to arrive at the desired goal However unimportant each man's information may be by itself, yet, when placed in juxta-position with another, the probability is that some position may be deduced which will throw a new light on the subject, and eventually, from elements apparently discordant and disembodied, a perfect concord and harmonious whole may be produced. Difficult as the question may appear, if we enter into the discussion with a fixed will and a firm determination, as occasion requires, cheerfully to communicate our experience and information to each other, I am convinced that the further we advance our labours will be easier, and the Gordian knot, which appears at present so complex, will be easily cut asunder.

I should long before this have forwarded the analysis from Norway, but the difficulty of communication in that country during the winter months is so well known, that I need not expatiate on it here. I have no doubt that in the course of seven or eight weeks I shall be able to communicate to you the results of the analysis, and to put you in possession of a specimen of the copper. In the meantime, I have placed in the hands of a gentleman, officially connected with the naval departments, a specimen of the copper produced at the Alten Mines, an analysis of which I can produce in about the same period as that of Rornas; previous to that time I trust the copper will be in the hands of Mr. Prideaux, who will be able to give us some opinion in regard to its quality and merits.

April 24 GERMANICUS.

COPPER SHEATHING.

SIR,—I am happy to observe that an interchange of queries have been arranged between Mr. Prideaux and the smelters, on the subject of copper sheathing; and as I had before taken part in the discussion, perhaps I may be allowed to put the first question—viz.: "If Mr. Prideaux will inform me from what experimental and theoretical experience he has had of smelting, how we shall bring forward our metal through the different stages, and make it as fine as the '*prill*' produced by the assayer from the ores, and at the same time retain our 12 per cent. surplus copper"—I will at once give him such information as will guarantee the make of a good quality copper for sheathing.—A ROASTER MAN: *Morfa, April* 26.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Demerara Railway Company—London Tavern, at One.
Hungerford Market Company—offices, at Twelve.
TUESDAY.....Anglo-Mexican Mint Company—offices, at One.
West Middlesex Water Company—offices, at Eleven.
Southwark-bridge Company—offices, at Twelve.
Gas-Light and Coke Company—Radley's Hotel, Blackfriars, at Eleven.
Haytor Granite Company—London Coffee-house, at Two.
Metropolitan Sewage Manure Company—offices, at Two.
WEDNESDAY...Ulster Canal Company—offices, at Eleven.
THURSDAY.....Mexican Company—offices, at One.
Westminster Fire Insurance Company—offices, at Twelve.
FRIDAY.....Equitable Reversionary Interest Company—London Coffee-house, Three.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

COMPRESSED-AIR ENGINE COMPANY.

An extraordinay meeting of the proprietors of this company was held at the Thatched House Tavern, St. James's-street, on Wednesday last, for the purpose of confirming the provisional agreements, for carrying into effect the arrangements with the patentees, and for authorising and directing the necessary steps for effecting a dissolution of the company.—M. MILEY, Esq., in the chair.—The CHAIRMAN said that he very much regretted that a sufficient number of shareholders were not present to constitute a legal meeting. Under the Deed of Settlement of the company, it was requisite that two-thirds of the proprietors should be present, and there were wanting between twenty and thirty more individuals to make up the necessary number. It was not the fault of the directors that the objects in view could not be accomplished, for they had done everything in their power to procure a sufficient attendance of shareholders. What the directors wished to effect was, to wind up the affairs of the company with as little expense as possible, in order that some portion of the sum subscribed might be available for distribution. As their affairs stood at present, and provided that a dissolution could be obtained without expense, there would remain about 5s. in the pound to be divided among them; but if they applied to the Court of Chancery, under the provisions of the Winding-up Act, he was of opinion that the balance on hand would be swallowed up in litigation. It was for the shareholders to suggest the course which they wished the directors to pursue. The directors had not put a shilling into their pockets from the commencement of the undertaking, and it could not be expected that they would incur any responsibility in the matter. Several shareholders then offered suggestions embodying what seemed to them the most eligible method of proceeding, but none of their propositions met with general concurrence, except one thrown out by Mr. Davis, the solicitor to the company, who proposed that the meeting should allow matters to rest as they were for a short time longer, and, in the meantime, the directors would endeavour to procure some large proprietor, who, when the liabilities of the company and the amount paid on the different classes of shares was accurately ascertained, would buy up, at a fair value, such a number of shares as would give the power of winding up the affairs of the company. The shareholders were unanimously of opinion that this was the most judicious mode of proceeding, and they also expressed their willingness to part with the shares held by them at a price which would induce some capitalist to undertake the transaction. A vote of thanks was then passed to the chairman, and the meeting separated.

NEW PATENTS.

C. A. Broqueite, of Rue Neuve, St. Nicholas, St. Martin, France, chemist, for improvements in printing and dyeing fibrous and other materials.

W. Kilner, Sheffield, engraver, for improvements in manufacturing railway and other axles and wheels, and in machinery to be employed in such manufacture.

L. Vernet, Buenos Ayres, for a method of preserving from destruction by worms, insects, decay, and fire, certain vegetable and animal substances.

T. H. Thompson, Blackheath-hill, civil engineer, for certain improvements in apparatus for preventing the rise of effluvium from drains, sewers, cesspools, and other places, and in apparatus and machinery for regulating the level of waters in rivers, reservoirs, and canals.

J. Barsham, Chelmsford, Essex, manufacturer, for improvements in separating the fibre from cocoa-nut husks.

C. Iles, Bordesley Works, Birmingham, machinest, for improvements in manufacturing picture-frames, inkstands, and other articles in dies or moulds; also in producing ornamental surfaces.

W. Falconbridge, Long-lane, Bermondsey, Surrey, for improvements in the manufacture of ho e, pipes, driving-bands, and valves for atmospheric railways.

B. Beniowski, Bow-street, Govent-Garden, major in the late Polish army, for improvements in the apparatus for, and process of printing.

R. Oxland, Plymouth, chemist, and J. Oxland, of the same place, chemist, for improvements in the manufacture of sugar.

W. A. Burke, Tottenham, manufacturer, for improvements in the manufacture of air-proof and waterproof fabrics, and in the preparation of caoutchoue and gutta percha, either alone or in combination with other materials, the same being applicable to articles of wearing apparel, bands, straps, and other similar useful purposes.

J. Horsley, Ryde, in the Isle of Wight, practical chemist, for certain improvements in preventing incrustation in steam and other boilers; also for purifying, filtering, and otherwise rendering water fit for drinkable purposes.

A. Garnier, late of Paris, but now of South-street, Finsbury, merchant, improvements n extracting and preparing colouring matter from orchil. (Being a communication.)

G. Simpson, Newington-butts, chemist, and T. Foster, Streatham, manufacturer, for improvements in manufacturing or treating solvents of India-rubber, and of other gums, or substances.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

H. Woodfall, Foot's Cray, paper maker, watermark to be applied to writing paper (To be called the diagonal lined paper,)

J. Classon, Blackhall-place, Dublin, denoter of time.

J. Kean, Sunderland, machine for making bricks and tiles.

H. Field, Glasgow, gas-heater for baths.

R. Hornsby, Lincoln, agricultural implement maker, portable farm-engine boiler.

J. W. Schlesinger, Clement's-lane, London, revolving blotter.

T. Key, Charing-cross, compensation valve-rod for cornet à pistons, trumpets, horns, &c.

J. Scott, Tixall, Staffordshire, Remington and Scotts' bridge.

J. Phillips and G. Hunt, Birmingham, shell back of wood for a button.

S. Suter, Birmingham, scratch brush.—*Mechanics' Magazine.*

ACCIDENTS.

Beam Mine.—As Thomas Trotheway, the engineman in Beam Mine, was screwing up the corner of the engine it slipped, and fell over the stairs on his head. He was taken up, and was sensible for a few minutes: he was carried to his house, but never spoke afterwards, although he lived a week.

West Bromwich.—As H. Northall, employed at Messrs. Davis and Sons Colliery, was preparing a skip on the pit bank, the chain broke, struck his leg, fractured it in a frightful manner, and had he not caught hold of an empty skip, would have precipitated him down the shaft. He was immediately conveyed to the General Hospital, Birmingham, when it was found necessary to amputate the limb.

High Pittington.—W. Hunter, who had gone to work at the east part of the Londonderry Pit, without waiting for the overman to examine it, was crushed to death by a mass of stones and rubbish, which fell from the roof.

Rowley Regis.—Israel Siviter was severely injured by a fall of coal at Haden Hill Colliery.—J. Pritchard was similarly injured by a like occurrence at the Brick House Colliery; and Isaac Brown sustained somewhat similar injuries by a fall of coal at Codsall Colliery.

Willen Hall.—Geo. Goacher was killed in a coal pit at Lane Head, by a large quantity of clod falling upon him.

Wolverhampton.—A collier, named Lloyd, sustained a serious fracture of a portion of the back-bone from a fall of coal, while working in a pit belonging to P. Williams, Esq.

Mostyn.—An explosion of fire-damp took place in the coal pit of Messrs. Eyton, by which three men were very severely injured; one of them so much so, that it is feared he will not recover.

Neath.—Daniel Llewellyn, aged 18, was killed in one of the Cwm Avon collieries, by a fall of stone from the roof.

Merthyr.—Joseph Fullylove, collier, aged 30, was killed in one of the Dowlais levels by an explosion of fire-damp.—D. Richards has died of injuries received from a stone falling on him at Abergwawr Colliery.

Dreadful Boiler Explosion at a Saw-Mill.—An explosion of a steam boiler, perhaps unexampled in its devastating effects in the metropolis, took place on Tuesday morning last, at the premises occupied by Mr. Keys, in Back Church-lane, Commercial-road East, known as the Patent Saw-Mills, causing a vast destruction of property, and much injury to persons. The premises were divided into several compartments, in which were fitted up the sawing and planing machinery of the most costly construction, the engine-room, boiler-house, &c. In the latter there were two boilers, one of 12-horse, and the other 8 or 9-horse power. It appears, from examination, that this latter boiler was originally constructed of plates of iron three-eighths of an inch in thickness, but long usage, and the heat of the furnaces, had reduced them to less than a quarter of an inch. In the early part of the morning this boiler was noticed to work sluggishly, but no fear was entertained, when, about half-past 10 o'clock, and about 2 minutes after the engine-driver had left the room, the boiler burst, with a concussion which shook the surrounding houses to their foundations. When the steam and dust had cleared away, a perfect shower of timber, bricks and mortar, and pieces of machinery continued to fall. The largest boiler, weighing many tons, was lifted from its bearings, and thrown far from its original position; the other was rent in pieces, one of which, weighing 2 tons, was thrown a distance of 100 feet, knocking down the front walls and windows of the counting-house and offices. Masses of timber and brickwork were blown high in the air, and fell through the roofs of the adjoining houses, and an iron tank, weighing 1 ton, was thrown high above the walls, and fell through the roof of the mill. The school-house in Church-street was blown down, an aged man had both legs broken by a piece of iron while passing along the road, a boy in Church-lane had his arm broken, a Mrs. Young was buried in the ruins, but extricated, and conveyed with the others to the London Hospital; a Mrs. Bailey, seriously injured by the shock her nervous system received, is since dead. A large flag-stone, weighing 1 cwt., was seen flying like a kite over the house-tops in a horizontal direction, until it reached Church-lane, Whitechapel, when it fell on the roof of Mr. Trigg's premises, No. 8, which it crushed completely in. Besides the vast injuries to Mr. Keys's premises, no less than 34 houses are more or less injured.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars	per oz.	£3	17	9	New dollars	per oz.	£0 4 10½
„ Portugal pieces....		0	0	0	Silver in bars (standard)		0 4 11½

GREAT INDIAN PENINSULA RAILWAY COMPANY.

—At a General Meeting of the proprietors of the company, held at the London Tavern, Bishopsgate-street, London, on Monday, the 23d day of April, 1849,

The Right Hon. Lord WHARNCLIFFE (Chairman of the Company) in the chair,

It was moved by the Right Hon. Lord Wharncliffe; seconded by J. H. Crawford, Esq., Brighton (formerly Member of Council in Bombay), and

Resolved, 1.—That the report, now read, be approved and adopted; and that this meeting approves of the arrangements made by the directors of this company, and of the acceptance by them of the terms offered by the Honourable East India Company.

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It was moved by M. E. Conan, Esq.; seconded by J. O. Balfour, Esq., and

Resolved, 2.—That the sum of £1000 per annum be placed at the disposal of the directors, in consideration of their services in connection with this company.

It was moved by J. Anderton, Esq.; seconded by Wm. J. Hamilton, Esq. (a director), and

Resolved, 3.—That this meeting thinks it due to the Court of Directors of the Honourable East India Company to record its sense of the fair and liberal spirit which that Hon. Court has evinced in the negociations with this company, which have resulted in the present terms; and this meeting cannot but also express its confidence that the same liberality will continue to be exercised in carrying out this undertaking to its completion, and to the consequent incalculable advantage of India and Great Britain.

It was moved by John Malleson, Esq.; seconded by Henry Cassin, Esq., and

Resolved, 4.—That the best thanks of the shareholders are due, and are hereby tendered to the noble chairman and the directors of this company, for their unwearied perseverance and attention to the interests of the proprietors, and for the ability and economy which they have manifested in the conduct of the business of the company.

It was moved by James Anderton, Esq.; seconded by Frederick Ayrton, Esq., and

Resolved, 5.—That the foregoing resolutions be published in the usual London newspapers.

(Signed) CORNELIUS NICHOLSON,
April 23, 1849. Superintending Director.

COMBINED VAPOUR ENGINE COMPANY.

PROVISIONALLY REGISTERED.

Capital £250,000, in shares of £20 each.—Deposit £2 per share—2s. per share to be paid upon allotment, and the remainder upon complete registration.

No call beyond the deposit of £2 per share can be made without the sanction of a general meeting. 42

The directors will proceed, on the 3d day of May next, to an allotment on such shares not already allotted, as may be applied for previous to that day.

All persons desirous of being included in such allotment are requested to send in their applications forthwith, addressed to the provisional directors, at the offices of the company, 47, Bedford-row.

The exhibition of the engine will be continued every Friday for a few weeks longer, rom One to Three o'clock, as heretofore.

Cards to view the engine may be obtained, as well as the prospectus, with the form of application for shares, and every information respecting the company, by application to the secretary, at 47, Bedford-row. B. TALBOT, Secretary.

CUNNINGHAM AND CARTER'S NEW SYSTEM OF RAILWAY PROPULSION.

—Railway Directors, Engineers, and the public generally, are invited to examine this system, which may be VIEWED on Mondays, Wednesdays, and Saturdays, from half-past Eleven to Three o'clock, at Ingram's Manufactory, 29, CITY-ROAD, near Finsbury-square.

The following is an estimate of the daily expense of working a double line of 50 miles long, during a period of 10 hours, with trains starting from each terminus every half hour six trains always running on the line:— 43

Coals for five stationary engines, of 100-horse power each, at 5 lbs. per horse-power per hour each (say, 11 tons, at 14s. per ton)			£7	14 0
Wages—Enginemen, with relief, 10 at 6s.			£3	0 0
,, Stokers	ditto	10 at 4s.	2	0 0
,, Cleaners	ditto	10 at 2s. 6d.	1	5 0
,, Drivers	ditto	12 at 5s.	3	0 0
,, Guards	ditto	12 at 5s.	3	0 0
,, Twenty men stationed on the line, 3s.			3	0 0=15 5 0
Repairs of engines, with depreciation, &c., at £200 per annum, each ×5=1000*l.* per annum—daily proportion			2	15 0
Contingencies			4	6 0
Total			£30	0 0

Forty trains, at 15s. per train=£30, being a fraction over 3¼d. per train per mile, independent of a saving of one-third of the present expense in the maintenance of way.

CWMBRAIN PATENT IRON REFINERY.

—The PROPRIETORS of IRON FORGES and MILLS are respectfully INVITED to MAKE TRIAL of Mr. BLEWITT'S REFINED IRON, or METAL, PREPARED by a

NEW PATENT PROCESS,

whereby the IRON is completely FREED from the IMPURITIES CONTRACTED in the BLAST-FURNACE, and, by judicious mixtures, rendered applicable to every kind of manufacture. Heretofore, the metal usually sold in the market has been produced from the worst pigs, scraps, and refuse of some particular blast-furnace, or set of furnaces, without any mixture, or any regard to quality, or the purpose for which it might be required. The PATENT METAL is PREPARED ON SYSTEM, and TO ORDER, for any of the following purposes:— 44

1. For BOILER and TANK-PLATES.
2. For TIN-PLATES, commonly called COKE-PLATES.
3. For STRONG CABLE BOLTS, RIVET, and ANGLE IRON.
4. This COMPOUND PUDDLED, beat under the hammer into a bloom, reheated, and rolled into a 6 or 6½-inch bar, makes TOPS and BOTTOMS for FLANCH and OTHER RAILS, of very superior quality, and attended with less waste than any other kind of iron used for that purpose. It is also well adapted for nail-rods, horse-shoes, and for other ordinary uses of the blacksmith.

The PATENT METAL is marked with a squirrel, and the initials "R. J. B.," and is to be had only at the "Cwmbrain Iron-Works," near Newport, Monmouthshire

PATENT TOUGHENED CAST-IRON.—Messrs. GARDEN

and MACANDREW beg to call the attention of Architects, Builders, Engineers, Ironfounders, &c., to the ABOVE DESCRIPTION OF IRON (Mr. Morries Stirling's Patent), which, after numerous trials, experimental and practical, is found greatly to exceed all other cast-iron in tensile and transverse strength, as well as in resistance to crushing forces. Several of the most extensive ironmasters have been licensed, and from them, or their brokers, the patent iron can be procured. 45

Messrs. GARDEN & MACANDREW have always a STOCK of this IRON in PIGS, and are ready to EXECUTE ORDERS to ANY EXTENT, on the shortest notice.
27, Queen-street, Cheapside, April 25, 1849.

STRUVE'S PATENT MINE VENTILATOR.

TO COLLIERY PROPRIETORS.

Quantity of air passed through a Mine almost unlimited, to the extent of 200,000 cubic feet per minute, if necessary—depending on size of apparatus.

No injury to pumps, tubbing, chains, ropes, or pitwork. 46

Gases kept clear.

Not influenced by barometrical and thermometrical changes in the atmosphere, or by wind

Current of air undeviating.

LICENSES will be GRANTED on application to
Mr. WILLIAM PRICE STRUVE, C.E., Swansea.

The ventilator has been erected at the Eaglesbush Colliery, near Neath, and is perfectly efficient, and may be viewed on application to the proprietors, Messrs. Penrose and Evans, Neath.

WARRANTED SAFETY FUSE.—W. BRUNTON & CO.

beg to inform Mine Agents, Contractors, and Merchants, that having completed their Machinery for the MANUFACTURE of the ABOVE ARTICLE, they are enabled to offer FUSE of a very superior quality, and at considerably reduced prices.

W. B. & Co. can SUPPLY FUSE in ANY LENGTHS that may be required.
Penhellick Fuse Factory, Pool, Truro, Cornwall. 47

TESTIMONIALS.

We, the undersigned, hereby bear our testimony to the excellence of the Safety Fuse, manufactured by Messrs. Brunton and Co. We have had it in use in our mines; and, after sufficient trial, find it to be fully equal to any Fuse we have ever used:—

Carn Brea Mine.
R. H. Pike Purser.
John Leuten, James Miners, John Vivian, John James, } Agents.

North Pool Agents.
James Evans.
John Nancarrow.
Frederic Evans.

South Roskear Agents.
John Dunkin.
William Thomas.

Cook's Kitchen Agents.
Joseph Vivian.
Richard Bennetts.

Cook's Kitchen Agents.
John Ivey.
William Hitchens.

North Roskear Agents.
Joseph Vivian.
William Michell.
William Thomas.

Tincroft Agents.
Peter Floyd.
Thomas Stainsby.
Thomas Loan.
Henry Hocken.
Richard Martin.

William Nancarrow.
Alex. Eudey, Joseph Eudey, } *Wheal Agar Agents.*

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WRIGHTON'S PATENT ELASTIC SCREW COUPLING.

The PROPRIETORS of this simple and useful INVENTION invite the attention of Railway Companies to the ADVANTAGES and ECONOMY to be derived from its general adoption. The severe tests to which it has been subjected on the Eastern Union Railway fully demonstrate that its application to trucks or goods waggons, with *dead draw hooks and solid buffers*, produces as perfect and beneficial a result *as a complete set of spring traction and buffing apparatus*, and at about one-fourth the cost of the cheapest that can be supplied. Its application to passenger carriages will be found equally beneficial in giving additional ease and elasticity to a train, and preventing the injurious shocks at starting and stopping so much complained of. For further particulars apply to Mr. Parsons, Albert-place, Lewisham; or at the Patent Office, 166, Fleet-street.

RIDER'S RAILWAY BRIDGE.

—This BRIDGE, BUILT wholly of IRON, will be ERECTED by the PATENTEE on the following terms:—

A BRIDGE, of 150 span, for a double track railway, broad gauge—Price £3000.
A BRIDGE, of 100 feet span, same dimensions—Price £1000.
These prices are exclusive of abutments or piers. 49
ROADWAY BRIDGES at a reduction on cost of from one-half to two-thirds.
Apply to Mr. S. MOULTON, Patentee, Bradford, Wilts,
or to Mr. Howard Jacobson, Suffolk-lane, Thames-street, London.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of the month. 50

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th 17th, and 27th of the month.

For plans of the vessels, rates of passage-money, and to secure passages and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

OVERLAND GOODS AND PARCELS FOR INDIA, ADEN,

CEYLON, MADRAS, CALCUTTA, SINGAPORE, CHINA, and BOMBAY, should be DELIVERED not later than noon on the 17th of each month; and if forwarded on the 18th, will be subject to an extra charge.

When the 18th falls on a Sunday, no package will be received after the 17th, and cases must not exceed 70 lbs. in weight, and when measuring over one cubic foot, they must be strong, and well hooped at the ends. 51

Peninsular and Oriental Steam Navigation Company's Offices,
122, Leadenhall-street, London, Feb. 23, 1849.

INDURATED AND IMPERVIOUS STONE, CHALK, &c.

—AGENTS, with capital, are WANTED in all TOWNS to SUPPLY (under British and Foreign Patents) the great demand for HUTCHISONISED MATERIALS—hard as granite, impervious to moisture, vermin, &c.; the cheapest and most durable for all buildings, hydraulic, paving, monumental and decorative work.—The profits are large.
Apply to HUTCHISON & CO., 52
East Temple Chambers, London, or Tunbridge Wells, Kent, stating name, address, and capital at command.

N.B.—Houses cured of damp. The produce of soft stone quarries, chalk, plaster of Paris, wood, pasteboard, and all absorbent materials indurated to resist frost, vermin, &c.
LICENCES GRANTED.

PATENT RAILWAY AND OTHER CARRIAGE AXLES,
MANUFACTURED BY THE

PATENT SHAFT AND AXLE-TREE COMPANY,

BRUNSWICK IRON-WORKS, WEDNESBURY, STAFFORDSHIRE.

The Judicial Committee of the Privy Council having declared that the AXLES MADE BY THE PATENT SHAFT AND AXLE-TREE COMPANY 53
had proved a PUBLIC BENEFIT in greatly conducing to the SAFETY of RAILWAY TRAVELLING, the exclusive right to manufacture has been extended for four years, on condition that the practice of charging a moderate price, proved hitherto to have been pursued, should be made imperative.

It was also proved that these Axles were in general use—upwards of 100,000 having been supplied to the English and Continental Railways, among whom are the London and North-Western, the Midland, and the Great Western; that they had withstood frequently severe tests applied by the engineers of these railways for the purpose of experiment, and others still more severe to which they were accidentally subjected in use. In one such instance a Patent Axle, 4¼ inches in diameter, sustained the whole force of a heavy train going at the rate of 60 miles an hour, by which it was twisted and bent nearly double, without showing the least fracture.

The patent principle of manufacture causes the axles to be equally strong in all directions, for the "faggot" is made in a cylindrical form, by the external bars being rolled of such a section as to fit accurately around a centre bar. This faggot, however large, is perfectly welded throughout its whole length at one heat, avoiding the necessity of the frequent heating and hammering of the ordinary mode, by which much risk is run of imperfectly welding, burning, and otherwise injuring the iron.

The use of this principle, combined with experience gained of the quality and admixture of the iron and mode of treatment best adapted to resist the strain to which an axle is subjected, enables the Patent Shaft Company uniformly to supply safe axles.

In all cases where the use of the Patent Shaft Company's Axles are specified for, it is respectfully recommended that information be sent to the works; for, although every Patent Axle is stamped with the company's name, worthless axles, made at an expense little beyond that of common bar-iron, have, in many instances, been substituted.

It was given in evidence before the Privy Council, by Robert Stephenson, Esq., M.P., that having, in consequence of an accident, tested a number of such common axles, he found 48 out of 50 broke so easily as to be perfectly unfit for use: that he ordered them all to be removed, and that he has since recommended the Patent Axles to be used exclusively.

The trial of the Patent Shaft Company's Iron is solicited in cases where the power to resist a great strain is of importance. Evidence can be afforded from several railway engineers, of great economy having resulted from its use, in preventing the breakage to which their coupling chains were frequently previously subjected, particularly on the Midland Railway, where the heavy mineral traffic subjects these chains to unusual strains.

Iron manufactured on the patent principle is also recommended for coach and carriage axles, for, if not afterwards injured by the coachsmith, all risk of breakage will be avoided.

HOLNE PARK TIN AND COPPER MINE.

(WORKED ON THE COST BOOK SYSTEM.)

Capital £7680, in 1536 shares, of £5 each.—Deposit £2 per share. 54

OFFICES—18, ADAM-STREET, ADELPHI.

This valuable MINERAL PROPERTY is situate in the parish of HOLNE, in the county of DEVON, on the banks of the River Dart, and held under an agreement for lease of 21 years, at 1-12th dues.

This mine is a new discovery, and now at work to the south of the Whiddon, Ashburton United, and West Beam Tin and Copper Mines, about 3 miles; and to the north-east of Coombe Tin Mine, 1 mile. It is about 2 miles west of the town of Ashburton, and 8 miles from Totness, through which place the South Devon Railway passes to Plymouth, by means of which the ore can be conveyed to port for exportation, at a very moderate expense. The River Dart being navigable as far up as Totness, also affords an easy and cheap mode for exportation.

The sett is in a beautiful killas, or clay-slate strata; there are four lodes now worked on, and there are several large lodes of tin and copper traversing the sett—all composed of gossan, soft spar, prian, mundic, carbonate of lime, and large rocks of copper ore, of rich quality (from 14 to 26 per cent.)

To the west of this sett the lodes form a junction with the Dartmoor granite range, where the great deposits, both of tin and copper, &c., have been discovered, making the largest and most productive mines in Cornwall and Devon.

The River Dart, running at the foot of the hill, can be made available (with a small outlay) for all the purposes of the mine, thereby superseding the necessity for steam-power, and causing a great saving in the working of the mine.

The reports of the various mining captains who have lately inspected the sett, speak in the most flattering and encouraging terms.

These reports are set out at length in the prospectus, which can be obtained at the offices, where also every other information will be given, together with the form of application for shares, by applying personally, or by letter, addressed to the secretary, 18, Adam-street, Adelphi, London.—Copies of the prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street.

EMERSON'S PATENT LIQUID CEMENT

is ready for use, is simple in its application, and only ONE-EIGHTH the COST of OIL PAINT; for beauty it is pre-eminent over all other materials used on the fronts of houses—giving the exact appearance of FINE CUT STONE; can be used at once on fresh Roman cement or other plastering; is particularly calculated for country houses, villas, or gate entrances that have become soiled or dingy, which can be beautified in any weather, at a trifling cost. Sold in casks, of 1, 2, and 3 cwts., at 8s., 15s., and 21s. each

PATENT MINERAL PAINT. 55

Invaluable as a COATING for SHIPS' SIDES and BOTTOMS, all kinds of WOOD or METAL WORK, roofing felts, leaky roofs, spouts and gutters, doors, sheds, railing, and all kinds of out-door work, and being perfectly waterproof, will preserve their surfaces from atmospheric influence and decay—requires no preparation, and will dry in a few hours.—Sold in casks, 2 to 50 gallons. Brilliant black, 2s.; rich brown, 2s. 9d. per gall.
BELL, LEAR, & CO., 16, Basing-lane, Cheapside.

PATENT ALKALI COMPANY'S METALLIC PAINTS.

COLOURS—BLACK AND PURPLE BROWN.

These paints (the products of a patent process), possess peculiar and valuable properties not otherwise attainable, and are perfectly free from the deleterious qualities of white-lead. They surpass all other paints ever yet discovered in point of DURABILITY and ECONOMY; two coats being more than equal to three of any other description. From their chemical composition, they are pre-eminently adapted for covering IRON; also STUCCOED or BRICK BUILDINGS, and every kind of WOOD WORK. The process by which the base of these paints is produced, makes it impossible that any change should take place in their composition from atmospheric influence. Their identity with iron secures them from galvanic action, so fatal to the durability of lead and other paints on iron work. 56

They have been exposed on SHIPPING to the action of sea water, and of the sulphuretted hydrogen so prevalent in sea ports and tidal harbours, for more than THREE YEARS, without change.

Their CHEAPNESS and STRENGTH render them pecularily eligible for IRON BRIDGES, ROOFS, and RAILINGS, FARM BUILDINGS, and SHIPPING.

The attention of the SHIPPING INTEREST is particularly directed to the company's patent compound metallic BLACK PAINT (the only metallic black paint of any value in existence), which will be found to act as a most valuable preservative when applied to iron steam-boats, and wooden vessels. It also forms a beautiful covering for STOVES, and is susceptible of a high polish.

Several imitations of the Patent Alkali Company's paint having been sold under the name of IRON PAINT, the directors of the company deem it necessary to caution the public that no other iron paint is genuine, or partakes in any degree whatever of the properties of the company's paints, the base of the latter being obtained solely by a series of processes, which are protected by the company's patents, and to which alone is owing their extraordinary body, or covering power. Numerous and most satisfactory testimonials have been forwarded to the company's offices, copies of which may be had of the secretary or of the agents.

Price, by the ton, £25, delivered in London or Liverpool, exclusive of packages.

To be obtained exclusively on application to the secretary, Mr. J. A. West, at the offices of the company, 20, Fenchurch-street, London; or of any of the undermentioned parties, who are the only agents of the company:—

Messrs. Evans Brothers, London; Messrs. Matthews and Leonard, Bristol; Messrs. Evans and Hodgson, Exeter; Messrs. Clarke and Fill, Yarmouth, Norfolk; Mr. D. Sandeman, Glasgow; Mr. G. Sandeman, Dundee; Mr. R. Newby, Bradford, Yorkshire, Mr. R. S. Farr, Edinburgh; Mr. W. Bailey, Wolverhampton; Messrs. Vint and Co; Newcastle-on-Tyne, and Sunderland; Mr. Robert Oxland, Plymouth; Mr. Joshua Fox, Tregedna, near Falmouth.

SCOTTISH PROVIDENT INSTITUTION—

ESTABLISHED 1837.

INCORPORATED BY SPECIAL ACT OF PARLIAMENT, 1848.

TRUSTEES.

The Right Hon. W. JOHNSTON, of Kirkhill, Lord Provost of the City of Edinburgh.
CHARLES COWAN, Esq., M.P.
WILLIAM CAMPBELL, Esq., of Tillicchewan.
JOHN MASTERMAN, Esq., No. 35, Nicholas-lane. 57
JAMES PEDDIE, Esq., W.S.

Mutual assurance by very moderate premiums.—Whole profits divided amongst the assured exclusively.—Policies indisputable, unless obtained by fraud.—No entry money.

Annual Premiums per £100, with whole Profits.

Age 20.	Age 25.	Age 30.	Age 35.	Age 40.	Age 45.	Age 50.	Age 55.
£1 15 8	£1 18 0	£2 1 6	£2 6 10	£2 14 9	£3 5 9	£4 1 7	£5 1 11

The Eleventh Annual Report is now ready, and, with tables and every information, may be had on application. WILLIAM OWEN HARRIS, Secretary.
LONDON OFFICE—No. 12, MOORGATE-STREET.

THE STEAM-ENGINE—W. BROTHERTON & CO. beg

to CALL the ATTENTION of ALL PARTIES EMPLOYING STEAM-POWER to their PATENT PURIFIED OIL for the ECONOMICAL WORKING of the STEAM-ENGINE and other MACHINERY.

The adoption of its use effects a saving of 25 per cent. on the quantity required for lubrication over any other oil; and its properties are such as to greatly preserve the bearings of machinery in general. A trial will prove the fact. 58

W. BROTHERTON & CO.,
PATENT OIL FACTORY, HUNGERFORD WHARF, CHARING-CROSS, LONDON.

IMPORTANT TO MINE OWNERS, &c.

GUTTA PERCHA COMPANY—PATENTEES,

CITY-ROAD, LONDON.

The GUTTA PERCHA COMPANY beg to bring under the notice of Mine Owners, Manufacturers, &c., the GREAT SAVING, both of time and expense, which is effected by the use of the GUTTA PERCHA PUMP BUCKETS and VALVES. These Buckets may be had of any size or thickness, *without any seam or raised joint*. They are unaffected by acids, alkalies, &c. Cold water will never soften them, and they are, consequently, much more durable than leather, and also cheaper. The most gratifying testimonials have been received from millowners, who have had these Buckets in operation for several months past, without the slightest repairs being required. 59

GUTTA PERCHA TUBING

Being so remarkable a CONDUCTOR of SOUND, is now being extensively applied for CONVEYING MESSAGES from ONE BUILDING, or PLACE, to ANOTHER. If a Tubing of this material, 1 inch diameter, be carried from the mouth of a mine, or pit, down the shaft, to various parts of the mine (no matter whether a quarter or half a mile distant), an instant communication may be established by means of the whistle, on Whishaw's principle, and a conversation carried on as distinctly as though the parties were but a few feet from each other. When these Tubes are in general use, they will greatly lessen the *loss of life in mines*.

GUTTA PERCHA DRIVING BANDS

Continue to secure a continually increasing demand; they can be had of any size or length. Their durability and strength, permanent contractility and uniformity of substance, their non-susceptibility of injury from contact with oils, grease, acids, alkalies, or water, and the facility with which the only joint required can be made in bands of from 200 to 300 feet long, render them superior for almost all working purposes, and decidedly economical.

GUTTA PERCHA Soles for Boots and Shoes, Bowls, Buckets, Picture Frames, Brackets, Mouldings, Surgical Instruments, Vases, Cups, Inkstands, Balls, &c., may be had at the Company's Works, Wharf-road, City-road, London, or of any of their wholesale dealers in town or country.

DAMP AND GASEOUS EXHALATIONS.

SANATARY MEASURES.

All MEMBERS of BOARDS OF HEALTH are especially DIRECTED to the most EFFECTIVE MEANS which they can ADOPT to PREVENT the injurious and often FATAL EFFECTS upon the HEALTH of the COMMUNITY, arising from exhalations that are produced from moisture, decayed animal matter (as in grave-yards), stagnant water, and collections of foetid refuse, tending to produce a miasmatic state of atmosphere. In situations so effected, the impervious quality of the ASPHALTE of SEYSSEL renders it the most perfect PAVEMENT or COVERING that can be relied upon for hermetically closing, and thereby preventing the rising of moisture and escape of noxious vapours. The present extensive application of this material for covering roofs, terraces, and arches, for preventing the percolation of wet, is strong evidence of its effectiveness for the above purposes, which is further confirmed by the following extract from the Report of the Commissioners on the Fine Arts:— 60

"In 1839, I superintended the construction of a house of three stories on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and interwal walls was covered at the level of the internal ground floor with a layer of SEYSSEL ASPHALTE,* less than half an inch thick, over which coarse sand was spread.

Since the above date, no trace of damp has shown itself round the walls of the lower story, which are for the most part painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ in. above the external surface of the soil, and only 19½ in., at the utmost, above that of the sheet of water.

The layer of Asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots indicating the presence of damp have been since remarked at the base of the door-posts."

* This method has been adopted at the new Houses of Parliament.
Seyssel Asphalte Company, Stangate, London. I. FARRELL, Secretary.

NEUBER'S SCENTED LIQUID GLUE, being perfectly

transparent, is admirably ADAPTED for LADIES' FANCY WORK, &c.
In bottles, at 1s. each.

NEUBER'S IMPROVED LIQUID GLUE. 61

NEUBER'S WASHABLE WATER VARNISH, for PAPER HANGING, &c., is without smell, and requires no preparation of size.—Best full bodied, 12s. per gallon; flat, 8s.; and in bottles at 1s. and 1s. 6d.

NEUBER'S IMPROVED SUPERIOR WHITE PAPER VARNISH, for MAPS, PLANS, &c.—14s. per gallon, and in bottles 1s. each.

NEUBER'S TRANSPARENT FRENCH POLISH, 28s. p. gall., and in bottles 1s. each.
Naptha Polish, 14s. per gallon; Best Dark Oak Varnish, 10s.; Pale, 12s. per gallon.
Best French ditto, 21s. per ditto; Best Dark Carriage ditto, 13s.; Pale, 14s. per ditto.
Wholesale at the Patentees, NEUBER & WATKINS,
Varnish and Japan Manufacturers, 549, New Oxford-street, London.
Samples forwarded on receipt of 18 postage stamps.

Wholesale Agents—Low and Son, perfumers, 330, Strand; Hopwood and Parke, Fish-street-hill, London; P. Walker and Co., Jamaica-street, Glasgow, and 1, Duke-street, Leith; Robinson, Palmer, and Palmer, operative chemists, Colmore-row, Birmingham; W. Sims, Bath; F. Myers, Preston.

N.B.—Respectable local agents are required for the provinces.

FOR EVERY HOUSE IN THE KINGDOM.

HARPER TWELVETREES' GENUINE CONCENTRATED WASHING PREPARATION,

for accomplishing a week's wash in 1½ hour, and is warranted not to injure the finest fabric.—Sold by all chemists and oilmen, in bottles, at 6d., 1s., and 1s. 6d. The 1s. 6d. bottles contain sufficient for 48 gallons of water, which will boil three lots of clothes, being equal to 144 gallons.

All the leading journals in the kingdom have spoken favourably of this invaluable process, now adopted in most of the Infirmaries, asylums, public institutions, and families throughout the kingdom.

MANUFACTURED only by TWELVETREES, BROTHERS, Ink and Blacking Manufacturers, Millman-street, Bedford-row, London, wholesale and for exportation.
Two thousand more agents wanted. 62
Sold wholesale by Barclay and Sons, Sutton, Edwards, Hansey, &c.

No Chemical or Potash preparations are introduced, which are notoriously injurious to linen.—MANUFACTORY—MILLMAN-STREET, BEDFORD-ROW, LONDON.

THE SCIENCE OF WASHING.—"A New Mode of Washing,"

says the *Maidstone Gazette* of January 30, 1849, "which has been advertised by Mr. Twelvetrees, bookseller, has been submitted to us for trial. We have ascertained by careful experiment that the plan pursued is really a great saving. Several persons who have purchased the pamphlet have been so well satisfied with it, that they have called at our office to suggest that we might do great good, and save much unnecessary labour, by strongly recommending its adoption by our readers generally, in our scientific column. We do this most conscientiously."—The above method is so economical and expeditious, that a FAMILY'S SIX WEEKS' WASH CAN be ACCOMPLISHED BEFORE BREAKFAST, for less than 6d., without a washerwoman. 63

Directions to be had only of Harper Twelvetrees, bookseller, 14, New Millman-street, Foundling, London, for 31 stamps and a directed envelope, and of all booksellers.

Just published, price 2s., or by post for 2s. 6d.,

THE SCIENCE OF LIFE: or How to Live and What to Live

For; with ample Rules for Diet, Regimen, and Self Management—together with Instructions for securing perfect Health, Longevity, and that sterling state of happiness only attainable through the judicious observance of a well-regulated course of life. 64
By A PHYSICIAN.
London: Kent and Richards, Paternoster-row, and all booksellers.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1866 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, 65

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

THE PATENT OFFICE AND DESIGNS REGISTRY,

No. 210, STRAND, LONDON. 66

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [*April 28, 1849.*